grass valley
A BELDEN BRAND

LIVETOUCH

SPORT HIGHLIGHTS & REPLAY SYSTEM

Software version: 1.10

User Guide

Issue 3 Revision 2

2019-02-06

www.grassvalley.com

FCC Compliance

In order to comply with FCC/CFR47: Part 15 regulations, it is necessary to use Mini HDMI to HDMI high-quality triple-screened cable assemblies with integrated ferrite suppression at both ends.

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Title	User Guide
Part Number	Issue 3 Revision 2
Revision	2019-02-06, 09:32

Important Safety Information

This section provides important safety guidelines for operators and service personnel. Specific warnings and cautions appear throughout the manual where they apply. Please read and follow this important information, especially those instructions related to the risk of electric shock or injury to persons.

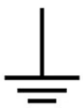
Symbols and Their Meanings

Indicates that dangerous high voltage is present within the equipment enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

Indicates that the user, operator or service technician should refer to the product manuals for important operating, maintenance, or service instructions.

This is a prompt to note the fuse rating when replacing fuses. The fuse referenced in the text must be replaced with one having the ratings indicated.

Identifies a protective grounding terminal which must be connected to earth ground prior to making any other equipment connections.



Identifies an external protective grounding terminal which may be connected to earth ground as a supplement to an internal grounding terminal.

Indicates that static sensitive components are present, which may be damaged by electrostatic discharge. Use anti-static procedures, equipment and surfaces during servicing.

Indicates that the equipment has more than one power supply cord, and that all power supply cords must be disconnected before servicing to avoid electric shock.

The presence of this symbol in or on Grass Valley equipment means that it has been tested and certified as complying with applicable Underwriters Laboratory (UL) regulations and recommendations for USA.

The presence of this symbol in or on Grass Valley equipment means that it has been tested and certified as complying with applicable Canadian Standard Association (CSA) regulations and recommendations for USA/Canada.

The presence of this symbol in or on Grass Valley equipment means that it has been tested and certified as complying with applicable Underwriters Laboratory (UL) regulations and recommendations for USA/Canada.

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The presence of this symbol in or on Grass Valley product means that it complies with all applicable European Union (CE) directives.

The presence of this symbol in or on Grass Valley product means that it complies with safety of laser product applicable standards.

Warnings

A warning indicates a possible hazard to personnel, which may cause injury or death. Observe the following general warnings when using or working on this equipment:

- Appropriately listed/certified mains supply power cords must be used for the connection of the equipment to the rated mains voltage.
- This product relies on the building's installation for short-circuit (over-current) protection. Ensure that a fuse or circuit breaker for the rated mains voltage is used on the phase conductors.
- Any instructions in this manual that require opening the equipment cover or enclosure are for use by qualified service personnel only.
- Do not operate the equipment in wet or damp conditions.
- This equipment is grounded through the grounding conductor of the power cords. To avoid electrical shock, plug the power cords into a properly wired receptacle before connecting the equipment inputs or outputs.
- Route power cords and other cables so they are not likely to be damaged. Properly support heavy cable bundles to avoid connector damage.
- Disconnect power before cleaning the equipment. Do not use liquid or aerosol cleaners; use only a damp cloth.
- Dangerous voltages may exist at several points in this equipment. To avoid injury, do not touch exposed connections and components while power is on.
- High leakage current may be present. Earth connection of product is essential before connecting power.
- Prior to servicing, remove jewelry such as rings, watches, and other metallic objects.
- To avoid fire hazard, use only the fuse type and rating specified in the service instructions for this product, or on the equipment.
- To avoid explosion, do not operate this equipment in an explosive atmosphere.
- Use proper lift points. Do not use door latches to lift or move equipment.
- Avoid mechanical hazards. Allow all rotating devices to come to a stop before servicing.
- Have qualified service personnel perform safety checks after any service.

Cautions

A caution indicates a possible hazard to equipment that could result in equipment damage. Observe the following cautions when operating or working on this equipment:

- This equipment is meant to be installed in a restricted access location.
- When installing this equipment, do not attach the power cord to building surfaces.
- Products that have no on/off switch, and use an external power supply must be installed in proximity to a main power outlet that is easily accessible.
- Use the correct voltage setting. If this product lacks auto-ranging power supplies, before applying power ensure that each power supply is set to match the power source.
- Provide proper ventilation. To prevent product overheating, provide equipment ventilation in accordance with the installation instructions.
- Do not operate with suspected equipment failure. If you suspect product damage or equipment failure, have the equipment inspected by qualified service personnel.
- To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.
- This unit may have more than one power supply cord. Disconnect all power supply cords before servicing to avoid electric shock.
- Follow static precautions at all times when handling this equipment. Servicing should be done in a static-free environment.
- To reduce the risk of electric shock, plug each power supply cord into separate branch circuits employing separate service grounds.

Electrostatic Discharge (ESD) Protection

Electrostatic discharge occurs when electronic components are improperly handled and can result in intermittent failure or complete damage adversely affecting an electrical circuit. When you remove and replace any card from a frame always follow ESD-prevention procedures:

- Ensure that the frame is electrically connected to earth ground through the power cord or any other means if available.
- Wear an ESD wrist strap ensuring that it makes good skin contact. Connect the grounding clip to an *unpainted surface* of the chassis frame to safely ground unwanted ESD voltages. If no wrist strap is available, ground yourself by touching the *unpainted* metal part of the chassis.
- For safety, periodically check the resistance value of the antistatic strap, which should be between 1 and 10 megohms.
- When temporarily storing a card make sure it is placed in an ESD bag.
- Cards in an earth grounded metal frame or casing do not require any special ESD protection.

Battery Handling

This product includes a backup battery. There is a danger of explosion if the battery is replaced incorrectly. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions. Before disposing of your Grass Valley equipment, please review the *Disposal and Recycling Information* appendix.

Cautions for LCD and TFT Displays

Excessive usage may harm your vision. Rest for 10 minutes for every 30 minutes of usage.

If the LCD or TFT glass is broken, handle glass fragments with care when disposing of them. If any fluid leaks out of a damaged glass cell, be careful not to get the liquid crystal fluid in your mouth or skin. If the liquid crystal touches your skin or clothes, wash it off immediately using soap and water. Never swallow the fluid. The toxicity is extremely low but caution should be exercised at all times.

Recycling

European (CE) WEEE directive.

This symbol on the product(s) means that at the end of life disposal it should not be mixed with general waste.

Visit www.grassvalley.com for recycling information.

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1 Getting Started

Overview of LiveTouch Features

LiveTouch is a scalable sports highlights system that makes slow-motion and instant replay workflows fast and effortless. The intuitive touchscreen panel is quick to learn and easy to use, making highlights selection sure, simple and robust. LiveTouch can scale to meet HD, 3G-SDI and 4K UHD productions of any size. It is easily configurable to support large events and multiple studio productions. Uniquely, LiveTouch supports integrated editing with no delays due to media movement and without the cost of duplicating assets or storage. Highlights packages and instant replays get to air faster, and system design is dramatically simplified.

LiveTouch provides fast highlight selection, playlist editing and live play-out control through an interface that includes a mix of dedicated panel keys and variable function touchscreen softkeys, a responsive jog wheel and high-precision T-bar.

LiveTouch can form part of a larger system comprising one or more *seats*. Each LiveTouch seat consists of a desktop client application running on a PC, with an associated LiveTouch Panel.

LiveTouch Key Features:

- Designed for demanding live sports and instant replay workflows
- Scaleable to meet HD, 3G and 4K UHD productions of any size
- Instant effects and finishing tools
- Intuitive and straightforward touchscreen control panel for fast highlight selection, playlist editing and live playout control
- Efficient 4K UHD channel density
- High capacity online storage
- Unique multicam grouping and workflows
- Instant browse creation for streamlined collaborative workflows

LiveTouch Key Features Added in Version 1.10:

- Next generation Home screen for playout, ingest and live setup.
- Flexible grouping of looped clips in Playlists
- Super Motion (phase 1) (2x, 3x, 4x HD)
- Split audio editing on Panel and Client Desktop
- Assignment of Tag favorites to function keys on the Client Desktop
- Always-in-Record (AiR) management enables stop, pause and restart of the live recording on the LiveTouch Server.

LiveTouch Panel

LiveTouch features a dedicated hardware control panel with an intuitive touchscreen providing quick clip selection, speed tools and configurable user options. The panel features familiar button placement as well as a number pad for fast navigation by clip number and timecode. You can use the responsive jog wheel for agile navigation through clips and the high-precision T-bar for precise control of slow-motion playouts.

Fig. 1-1: LiveTouch Panel

Panel Touchscreen

The LiveTouch Panel a fully-functional touchscreen for intuitive highlight creation, navigation and playlist building. The touchscreen offers alternative, easy-to-learn controls for basic functions on a highly responsive touchscreen surface.

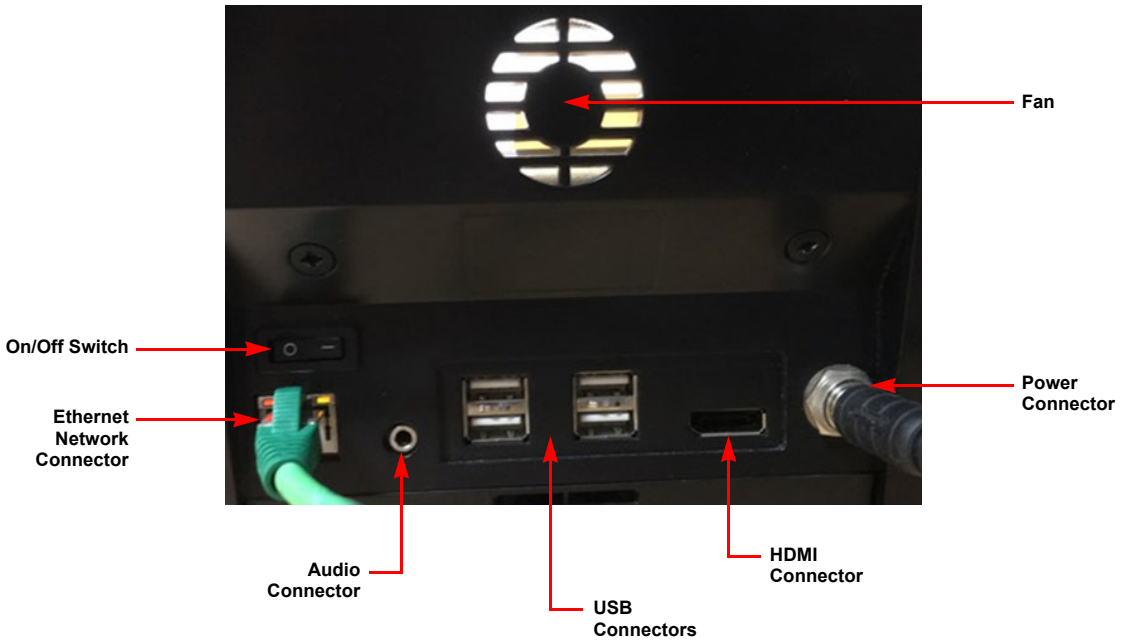


Fig. 1-2: LiveTouch Rear Panel

For connection details, see the LiveTouch *Installation Guide*.

LiveTouch Desktop Client

The LiveTouch Panel is paired to a LiveTouch Desktop client PC, running the Desktop client application and GUI, which acts as the intermediary between the LiveTouch Panel and LiveTouch Manager, passing commands over the network to execute playback operations.

Fig. 1-3: LiveTouch Client Desktop and Panel

The Client Desktop user interface (UI) also provides the LiveTouch user with expanded highlights, search and playback capabilities. Depending on system configuration, the Desktop may incorporate a fully featured timeline editor, which includes editing, color

effects and finishing tools, enabling you to take highlights and playlists directly into the editing interface for enhanced capabilities. You can then publish content directly back into the LiveTouch playout library.

LiveTouch Manager

LiveTouch ISA Manager

As video is recorded and ingested into the video server, the LiveTouch ISA keeps track of where each frame is stored along with any associated metadata, and the storage location in which the clips reside. You can search the LiveTouch ISA from a **Web Bin** to find clips or playlists indexed by the LiveTouch Manager.

The LiveTouch ISA usually hosts the LiveTouch Manager on a Virtual Machine.

LiveTouch Manager Virtual Machine

The LiveTouch Manager provides interface services to all connected LiveTouch Panels and Desktop Clients on the system. The LiveTouch Manager stores the clip highlights database (**Clips Library**), tracks users, loads tagging source files and provides user control of the SDI ports.

LiveTouch Server

The LiveTouch Server is based on the family of Grass Valley sQ Server platforms, which form the core of Grass Valley's fast turnaround news production and replay systems. The Server is a compact video storage server containing all the components required to acquire, record, store and mange content in a shared production workflow.

The LiveTouch Server manages both SDI Ingest and Playout at resolutions of 720/1080i, 1080p or UHD, depending on your selected configuration. Up to 25.6 TB of internal SSD storage can be supplied as required. The Server can work independently or in combination with other LiveTouch servers, with its compact design occupying only three rack units.

Each LiveTouch Server is factory configured either as an SD (standard definition), HD (high definition) or UHD (ultra-high definition) networked distribution server, employing industry standard compression systems.

Getting Started Checklist

There are a number of tasks you need to complete before you can start using LiveTouch once all components are connected.

You might find it helpful to use the following checklist:

- Configure the output ports for Playout and set the port user ID.
- Configure which of the ingested live feeds are recorded on the sQ Server.
- Select the live feeds you want to use for clipping.

You can complete most configuration tasks using either the LiveTouch Panel or Desktop Client GUI, however, it is recommended to use the setup features on the Panel as described

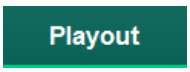
in the following sections. For setup information using the Desktop client GUI, see Chapter 5 on page 141.

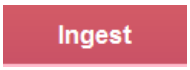
Starting the LiveTouch Panel

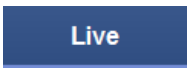
Start-up the LiveTouch Panel by switching on the LiveTouch rear panel switch see Figure 1-2 on page 3.

Initial Communication Setup in the Home Screen

Press to display the Home screen shown in Figure 1-4 on page 7, which includes the tabs **Playout**, **Ingest** and **Live** that enable you to set-up LiveTouch as follows:

- 

Defines the Playout ports used for the playout channels and the user authorized to access those ports.
- 

Defines the recording of the live feeds being ingested into the LiveTouch video server.
- 

Enables you to choose from the available ports that are recording (i.e., not paused or stopped) and either add them to groups, or remove them from groups. When satisfied with the grouping of the live recordings, you can select which of the groups to use for clipping in LiveTouch.

Note:	The number of possible playout ports depends on your system configuration.

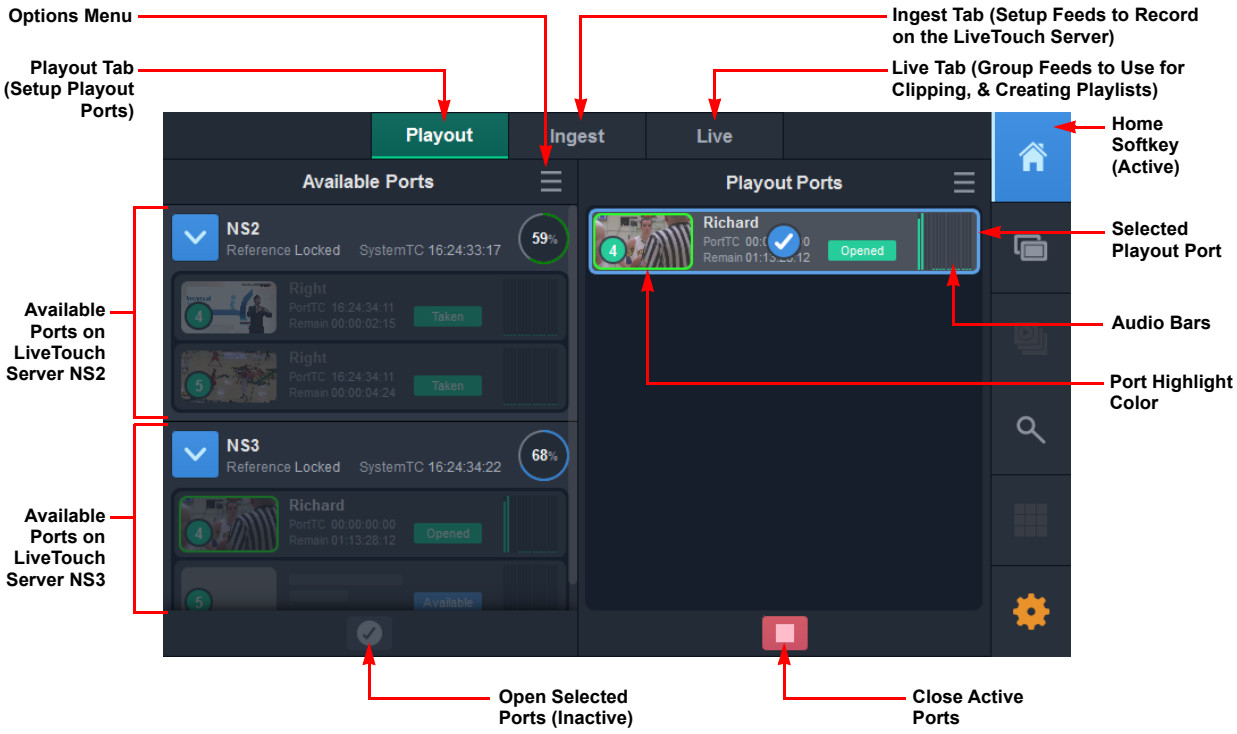


Fig. 1-4: Overview of the Playout Tab in the Home Screen

Setting-up Playout Ports and User ID in the Playout Tab

Activate playout ports and assign the port user ID in the **Playout** tab of the Panel as follows:

1 Select the Playout tab.

You will see the available LiveTouch servers (e.g., NS2, NS3 shown in Figure 1-4) in the left-hand section of the Panel each displaying the available ports for selection.

If there are any ports already open select the ports in the right-hand Playout Ports pane then press to close the ports.

2 Press to open the target server and display any available ports on that server.

The softkey changes to and the server ports are listed as either:

- Available Ports can be selected.

Or:

- Taken Ports can no longer be selected.

3 Tap the desired available Playout Ports to select them, then either drag the selected ports into the Playout Ports pane, or tap to open the selected ports.

To select all ports on a server, double-tap the server title banner.

This displays the **Open Ports for Playout** popup see Figure 1-5 on page 8.

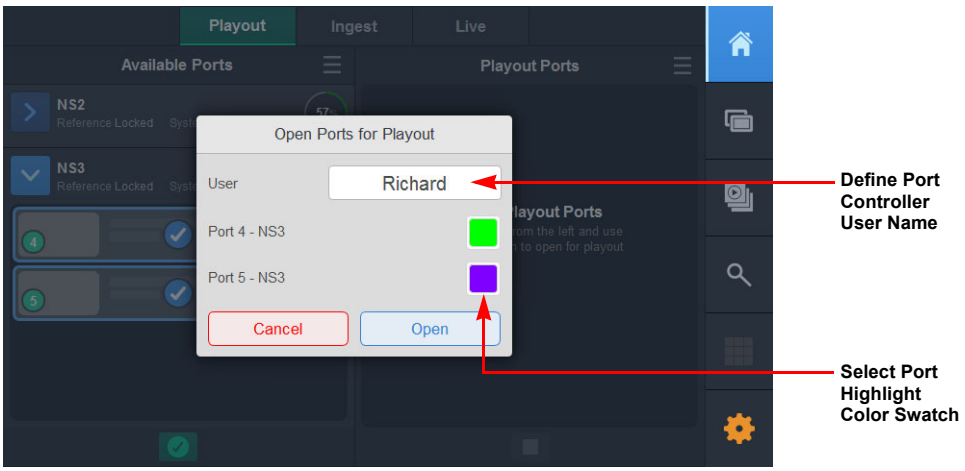


Fig. 1-5: Open Ports for Playout Popup

To change the user name of the port controller, tap in the **User** field, enter the new user name using the soft keypad, then press Confirm see *Figure 1-6* on page 9.

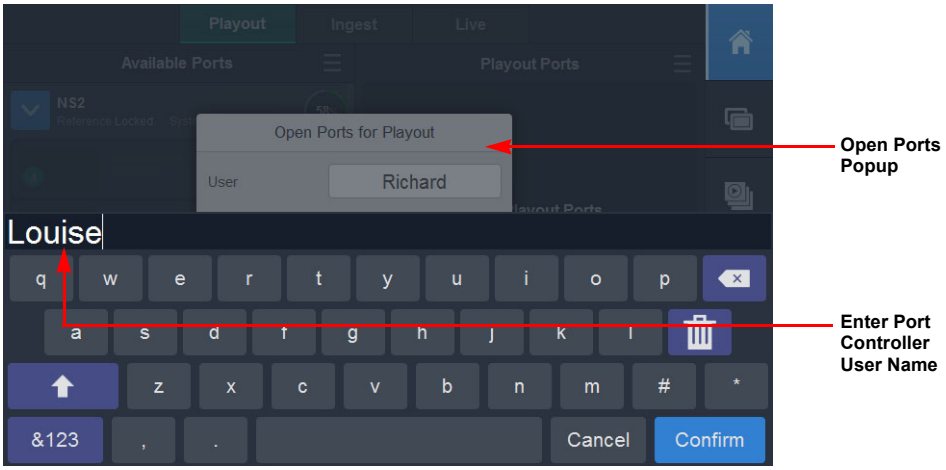


Fig. 1-6: Entering the User Name for the Port Controller on the Soft Keypad

To change the port and overlay highlight color, tap the color swatch corresponding to the port. This opens the **Overlay Color** popup, see Figure 1-7 on page 9.

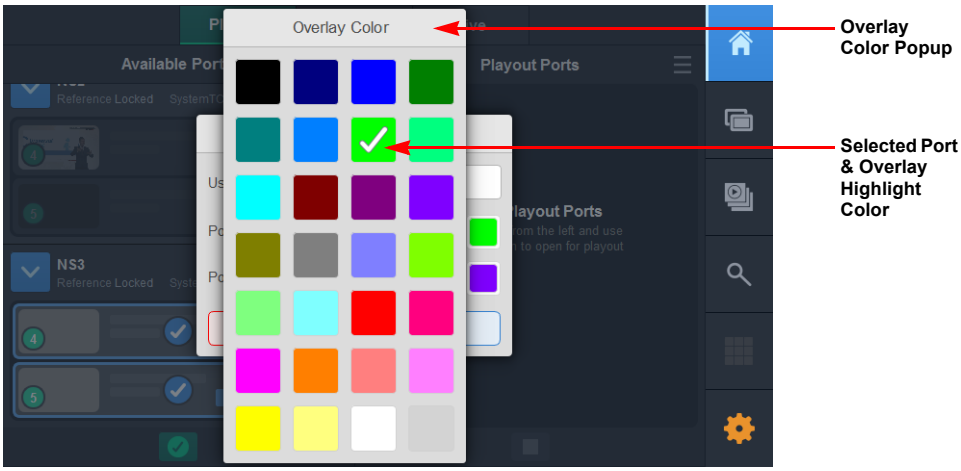


Fig. 1-7: Changing the Port and Overlay Highlight Color

Select a different port highlight color as required.

4 When satisfied with your Playout port and overlay settings, tap Open to open your selected ports.

If you want to discard your port selection(s), tap Cancel.

You will see the ports displayed in the selected Playout Ports pane on the right-hand side of the screen. The port windows will be empty until you select the live feeds you want to use for clipping, see the section *Setting-up the Live Feeds to Use in the Live Tab*, on page 19.

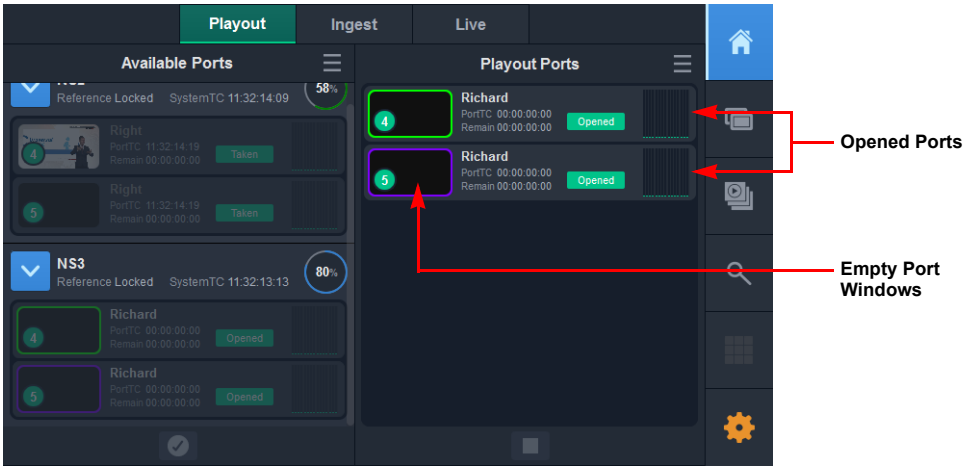


Fig. 1-8: Changing the Port and Overlay Color

Your selected playout ports are now active and each can be differentiated by the chosen highlight colors.

You can now set-up the ingest recordings and the live feeds to use by switching to the **Ingest or Live** tabs, see the section *Setting-up the Live Feeds to Use in the Live Tab*, on page 19.

Using the Options Menus in the Playout Tab

In addition to tapping the Panel touchscreen to open or close ports, you can use the two Options menus to perform these tasks.

Open or close either of the Options menus by tapping the options menu button: or , respectively.

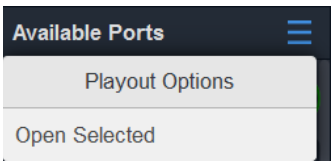


Fig. 1-9: Playout Options Menu - Open Ports

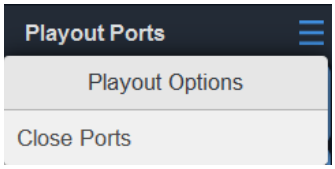


Fig. 1-10: Playout Options Menu - Close Ports

Closing Playout Ports

If you ever need to close the playout ports you are using to make them available to another user, you can do so as follows from the Playout tab:

1 Tap to select the active ports you want to close in the Playout Ports pane.

You can also select all ports for closure by selecting Close Ports from the **Playout Options** menu.

2 Tap .

This opens the Close Ports dialog, see Figure 1-11:

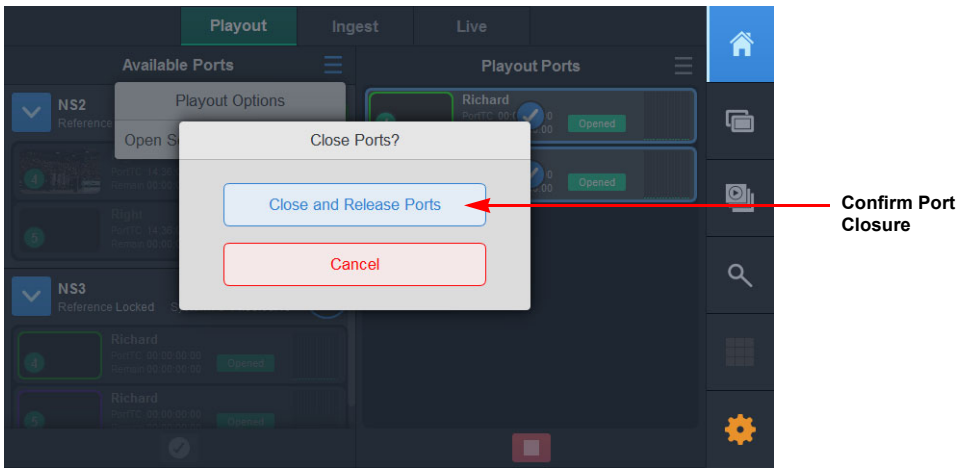


Fig. 1-11: Closing Playout Ports

3 Click Close and Release Ports to confirm the port closure.

The ports are returned to the Available Ports pane with the status Available.

LiveTouch Server Used Disk Space Indicators

Each of the Home screen tabs displays the available ports on connected LiveTouch servers in the left-hand pane of the LiveTouch Panel.

You should see that the right-hand side of the title banner for each available server displays a color-coded indicator showing the percentage of disk space currently used on that server.

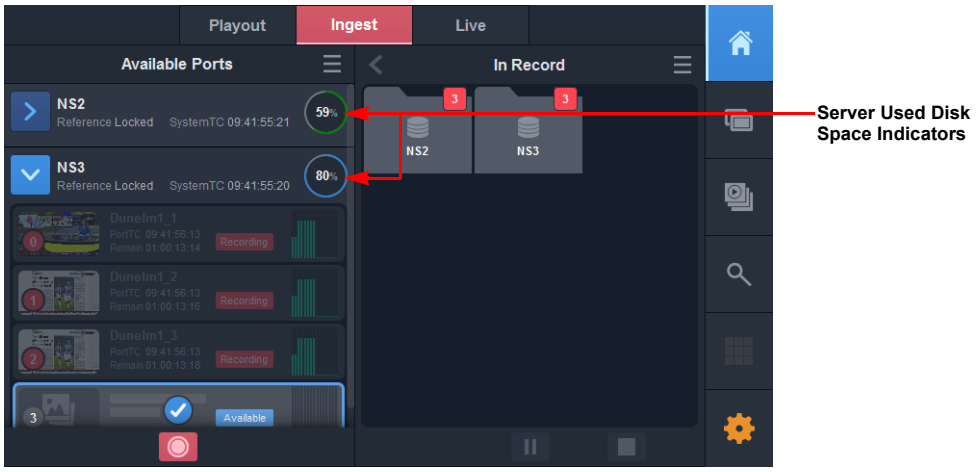


Fig. 1-12: Server Used Disk Space Indicators in the Ingest Tab

The threshold conditions for the used disk space indicators are as follows:

	Green:	0 to 65%	Sufficient disk space available.
	Blue:	65 to 85%	Sufficient disk space available but be aware that disk space on your server might soon become limited.
	Red:	86 to 100%	Insufficient disk space available, it is recommended to free up some disk space on the server, if possible.

Setting-up Recording of Ingested Feeds in the Ingest Tab

Use the **Ingest** tab to set-up recordings for the live feeds being ingested into the LiveTouch video server(s).

Set-up the recording of ingested live feeds in the **Ingest** tab of the Panel as follows:

1 Open the Ingest tab.

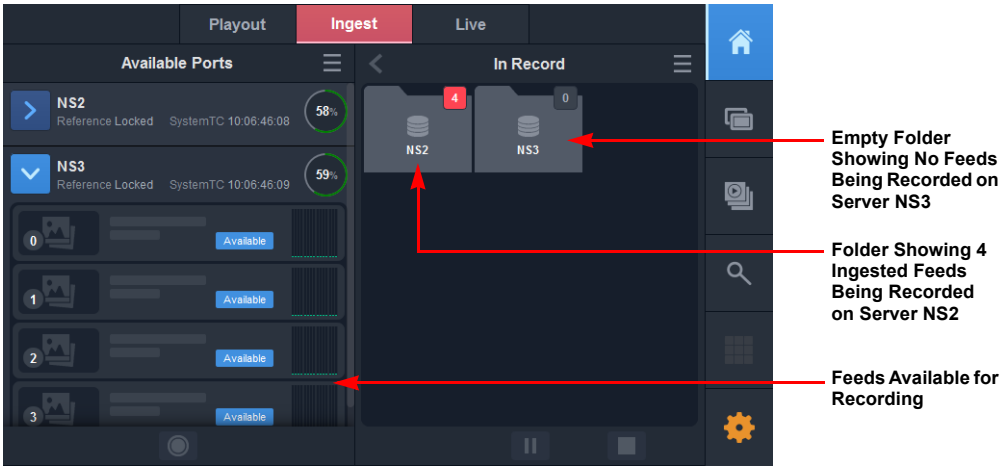


Fig. 1-13: Selecting Available Ports for Recording

You will see a folder icon for each available LiveTouch video server displayed in the **In Record** pane on the right of the screen.

2 In the **Available Ports** pane on the left of the screen, press > to open the target server and display the feeds being ingested that are available for recording.

The softkey changes to ∨ and the server ports are listed as either:

- Available Ports can be selected for recording.You can start any number of ports at once, even across servers.
- Recording Ports are grayed-out while being recorded and can no longer be selected.

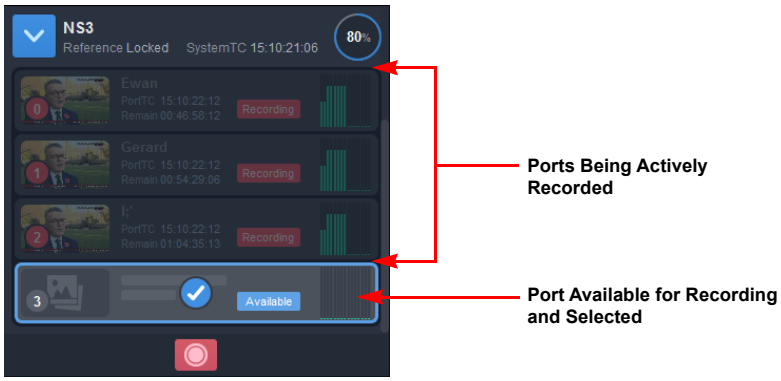


Fig. 1-14: Port Selected in Available Ports Pane

3 Tap each available port containing the feed you want to record to select the port(s), then either drag the selected ports into the In Record pane, or tap to add them to the **In Record** folder corresponding to that video server.

To select all ports on a server, double-tap the server title banner.

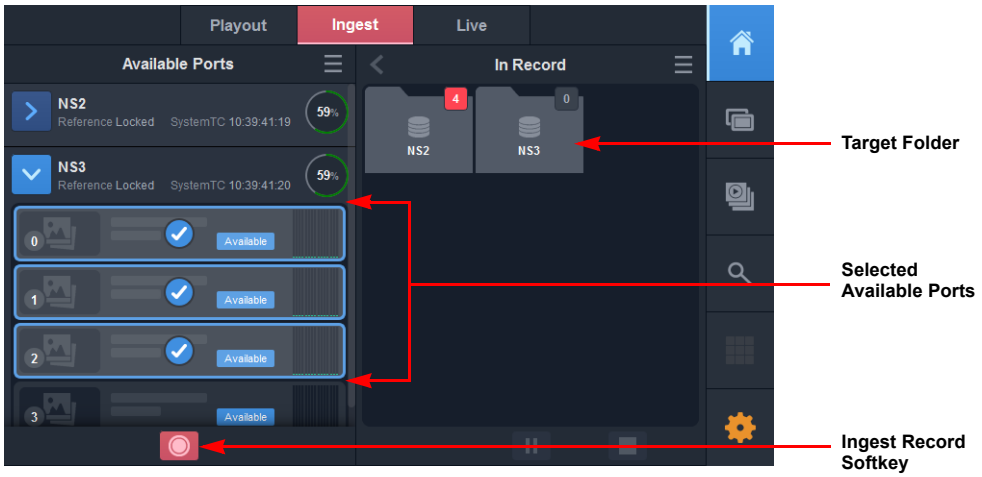


Fig. 1-15: Selecting Available Ports to Record

This opens the **Start Record on *n* Ports** popup.

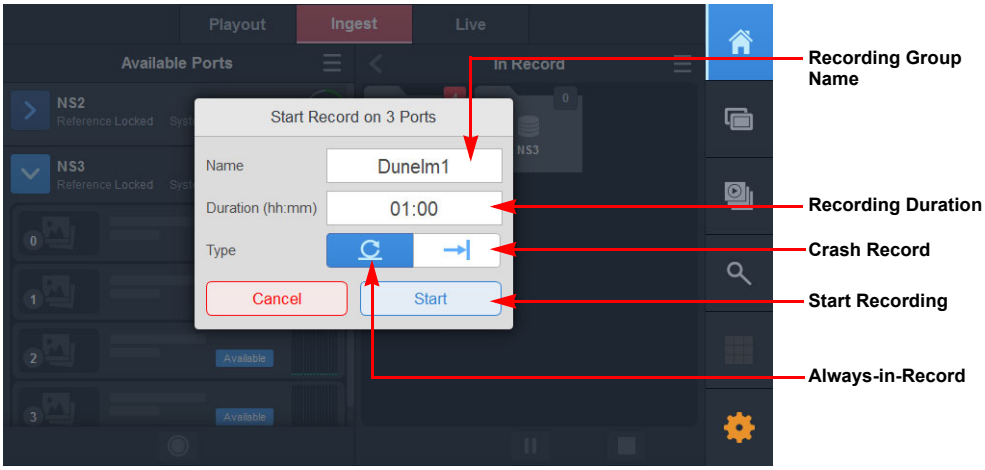


Fig. 1-16: Start Record on n *Ports Popup*

In the Start Record popup dialog, set the recording parameters as follows:

a Set the name used to identify the set of recordings. Each port in the group is sequentially labeled <*Name_1*>, <*Name_2*>, etc.

Make sure that the names you choose are not being used by another server on the system.

b Enter the duration of the of the recording in hours and minutes (default = 1 hour.)

c Select the type of recording from:

- **Always-in-Record:** Records to the buffer until full, then moves along, releasing space as recording progresses. The duration represents the available buffer size.

- **Crash Record:** Records for the configured duration, and then stops recording.

d Tap to start recording your selected ports.

The ports are added to the **In Record** folder corresponding to the server on which the ports are located. You will see the recording flag change to a red color and the number increase from zero to display the number of ports being recorded. In

addition, the status of the selected ports in the Available Ports panel changes from Available to Recording.

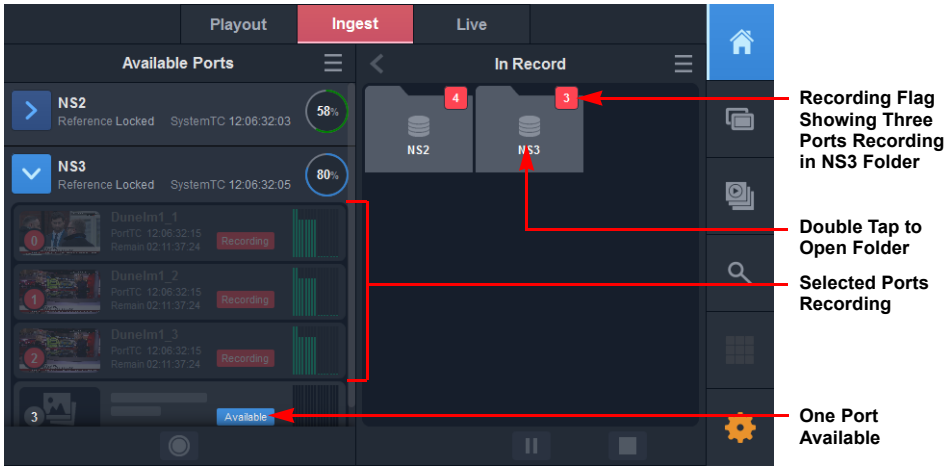


Fig. 1-17: Selected Ports in Record

To open the folder and manage or view the actual recording ports, double-tap the folder. LiveTouch lists the individual ports being recorded on that server.

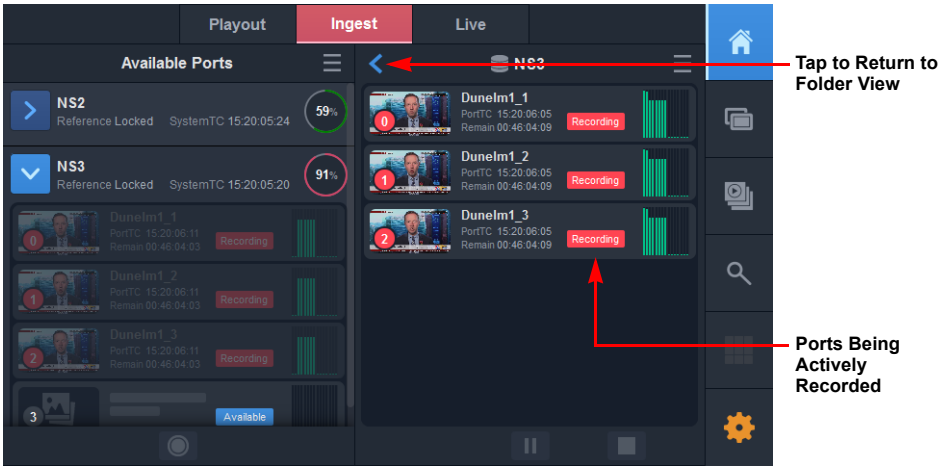


Fig. 1-18: Detailed View of Individual Ports Being Recorded

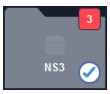
Pausing or Stopping Active Recording

IMPORTANT:	Use this function with caution. If you stop a recording on a port used by other LiveTouch operators, the recording clip is deleted from the LiveTouch Server.

When actively recording a port, you can pause or even stop the recording at any point. To do so:

1 In the right-hand **In Record** panel, select all recordings or specific recordings as follows:

- Select the entire folder:



: Pause or stop all recordings on that server.

- Select a specific recording or multiple recordings as required:

: Pause or stop only selected recordings.

This activates the Pause and Stop softkeys at the foot of the pane.

2 Tap either:

- to pause recording on the selected port or ports.
  This opens the Pause Record confirmation popup:

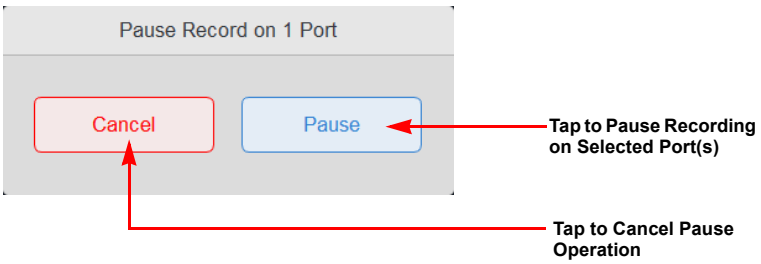


Fig. 1-19: Pause Recording Popup

- to stop recording on the selected port or ports.
  This opens the Stop Record confirmation popup:

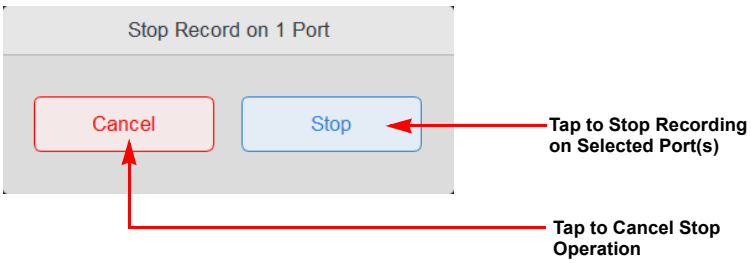


Fig. 1-20: Stop Recoding Popup

Using the Options Menus

In addition to tapping the Panel touchscreen to select or deselect ports, or pause/stop recording when in record mode, you can use the two Options menus to perform these tasks.

Open or close either of the Options menus by tapping the options menu button: or , respectively.

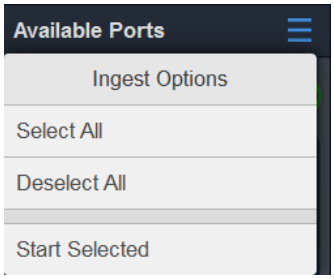


Fig. 1-21: Ingest Options Menu

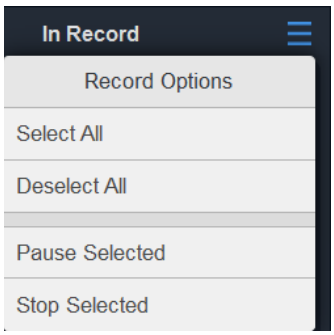


Fig. 1-22: Ingest Record Options Menu

Setting-up the Live Feeds to Use in the Live Tab

Use the **Live** tab to set-up the live feeds you want to use for clipping and creating playlists in the LiveTouch port windows of the Panel and Desktop Client. The playout ports will remain blank until you define the live feeds.

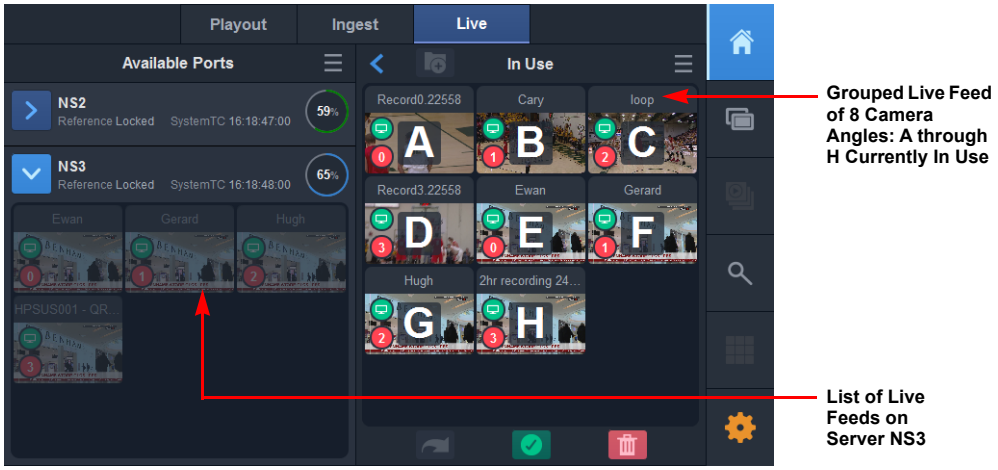


Fig. 1-23: Overview of the Home Menu Live Tab

Once you have opened the ports for playout and defined the recordings on the LiveTouch Server, you can select the live feeds you want to use in the LiveTouch interface as follows:

1 Open the **Live** tab.

2 In the **Available Ports** panel on the left of the screen, tap > to open the target server and display the available ports.

The softkey changes to ∨ and the server ports available for use are listed.

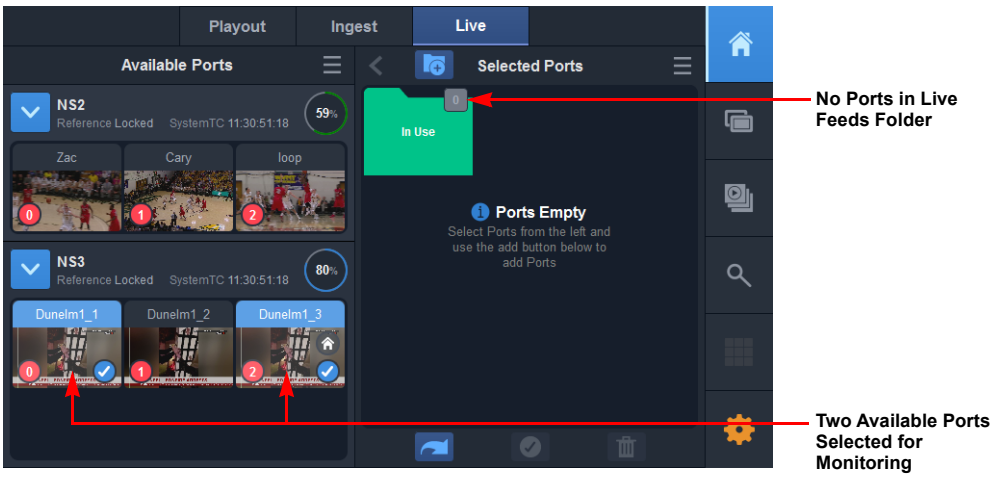


Fig. 1-24: Selecting Available Ports for Monitoring in the Live Tab

3 Select the server ports for the live feeds you want to use in the Available Ports pane.

Selected ports have a blue title banner and a blue check-mark, see Figure 1-25.

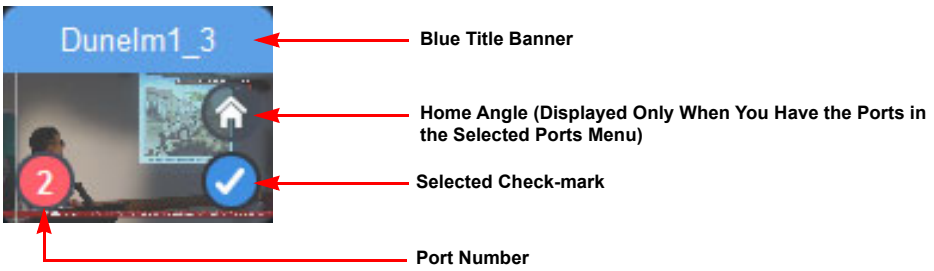


Fig. 1-25: Live tab - Selected Port

4 Move your selected ports into the Selected pane using either of the following methods:

- Press and hold the selected ports, drag them into the Selected Ports pane and then release on the target pane.
- Tap the add key to move the ports into the Selected Ports pane.

This opens the **Move Ports** popup allowing you to add ports to an existing group, create a new group folder containing the ports or to leave them un-grouped, for later assignment to groups. It is not mandatory to group your live feeds but it enables you to use the LiveTouch multicam features and switch between different camera angles in the group(s).

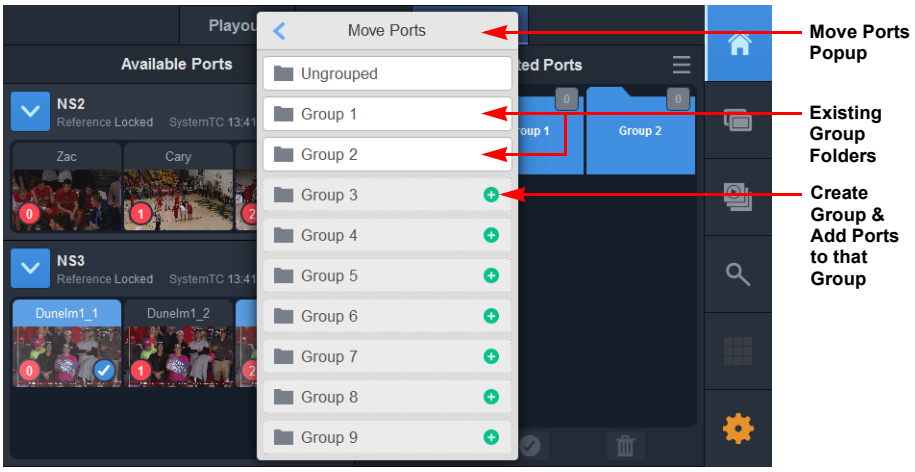


Fig. 1-26: Live tab - Move Ports Popup

Once you have moved ports into the Selected Ports pane, you can decide which ports to use for clipping. You can also modify the multicam groups, if required.

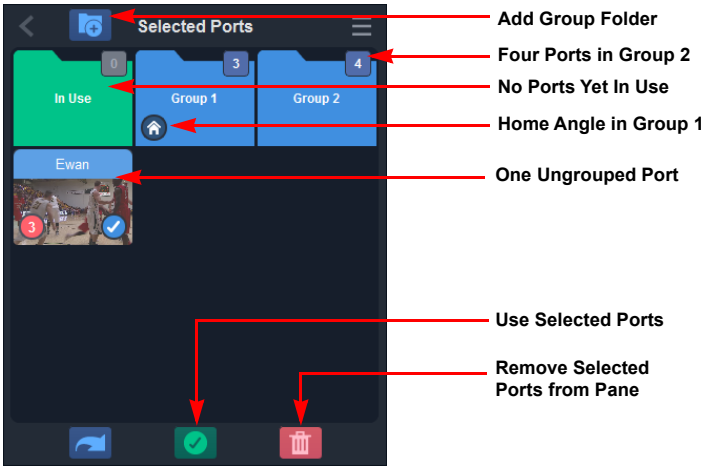


Fig. 1-27: Ports Moved into Selected Ports Pane and Selected

5 Select the ports you want to use for clipping, then tap .

You will see the message **Loading...** displayed as your selected live feeds move to the green **In Use** folder. You can now start to use the live feeds for clipping, creating playlists, etc.

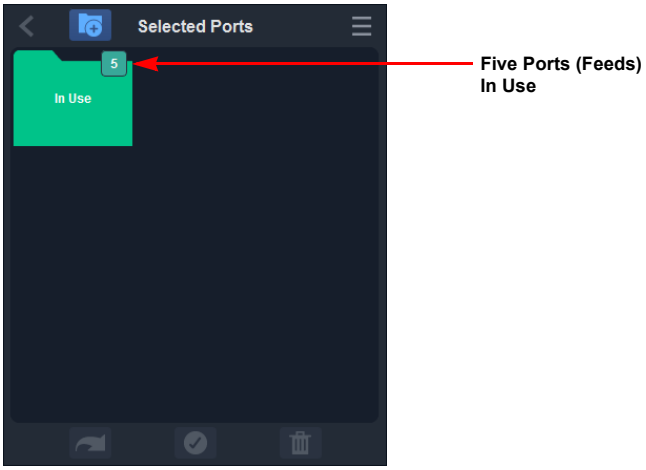


Fig. 1-28: Ports Moved into In Use Folder

The selected Live feed is now displayed in the port window of the Panel and in the active port window of the Desktop Client. You can switch between Live feeds on the Panel using either of the following methods:

- Use the Camera Feed keys **A** through **H** on the panel to switch to the corresponding feed (use **Shift** and **A** - **D** to switch to **E** - **H**).

- Press ***nn*** LIVE.

  Where ***nn*** is the camera number **1** to **99**.

The available live recordings you selected are also listed in the live bar below the Port windows in the Desktop Client application. Depending on which channel window has the current focus, you can switch between the available feeds simply by clicking the feed name tab in the live bar, see the section *Switching Between Live Recordings on the Desktop*, on page 147.

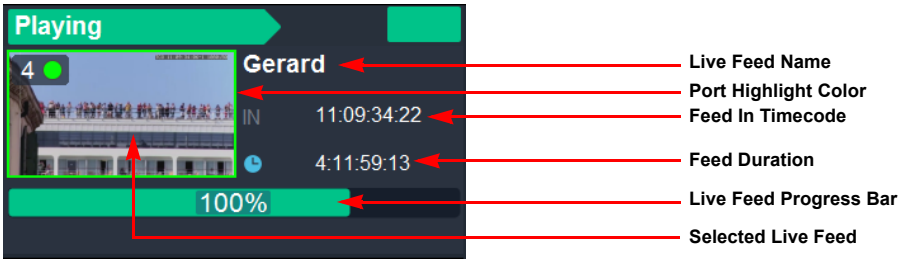


Fig. 1-29: Panel Port Window Playing Live Feed

Setting the Default Home Angle on a Port

> Note: You need to set the Home Angle on a Port before you can start using the feeds.

In the Live tab, you can set a Home Angle for one of the live feeds. This is initially set to the first feed in the first configured group, or first live feed if not assigned to a group.

If the feed belongs to a group, then LiveTouch initially assigns the live feed keys ABCD on the panel to that group by default. So when you use any of these keys, they act on the group containing the home angle.

If you later switch to a feed in a different group, using ***nn*** MATCH LIVE LiveTouch will switch the ABCD buttons from the home group to this alternative group.

If the home feed is not part of a group, then setting *home* assigns the A key to this feed for the rest of the session.

You can change the home angle from the Selected Ports pane as follows:

1 Double-tap to open the In Use folder.

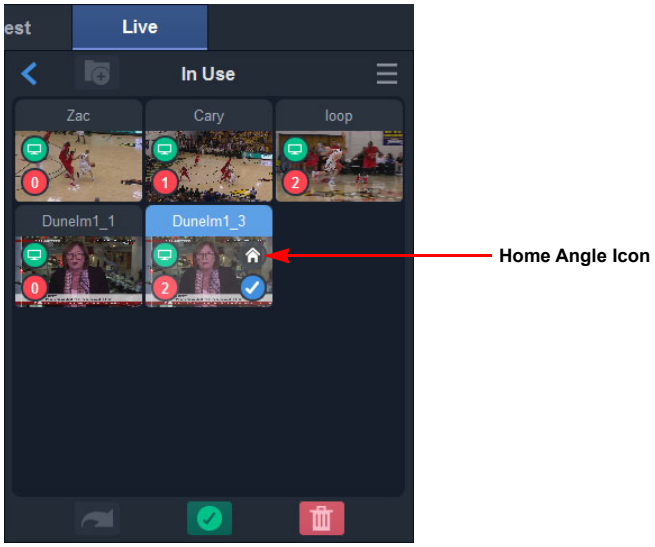


Fig. 1-30: Home Angle Feed Selected

2 Select the feed or group to which you want to assign the home angle.
The feed can be ungrouped, in the same group or in a different group.

3 Open the Selection Options menu and select **Set Home**.
You will see that the Home Angle icon is now added to the selected live feed.

Changing Camera Angle Letters in a Group

> Note: You need to set the Home Angle on a Port before you can start using the feeds.

Once you have grouped feeds together, you can change the default letters assigned to the camera angles by dragging a feed and dropping into a new position in the group. The assigned letter changes automatically.

Using the Options Menus

To close selected live feeds that are already in use:

1 Double-tap the In Use folder in the Selected Ports pane.

2 Tap a group or selected live feeds that you want to close, then tap .
The selected feeds are returned to the Available Ports pane.

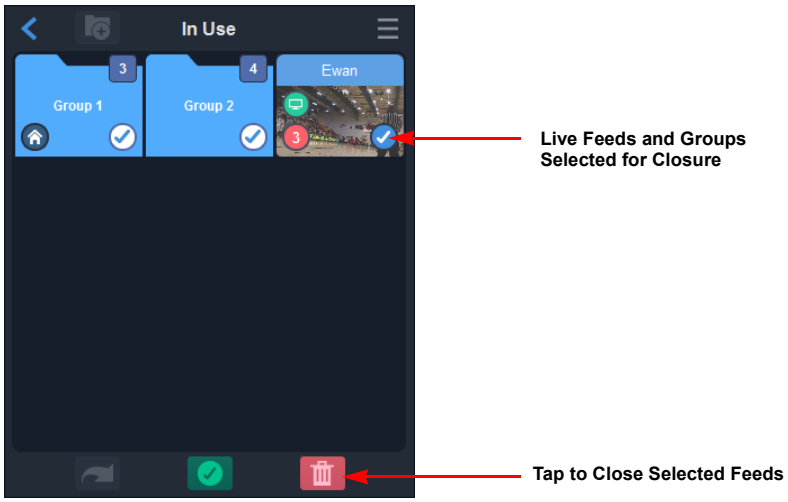


Fig. 1-31: Closing Selected Feeds

To close all in use live feeds together, tap to select the In Use folder, then tap .

Using the Options Menus

In addition to tapping the Panel touchscreen to select or deselect ports, or pause/stop recording when in record mode, you can use the two Options menus to perform these tasks.

Open or close either of the Options menus by tapping the options menu button: or , respectively.

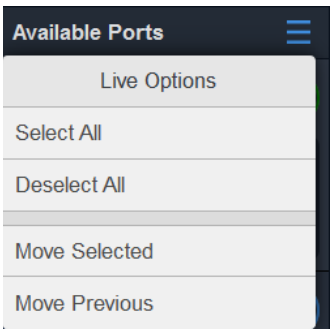


Fig. 1-32: Live Options Menu

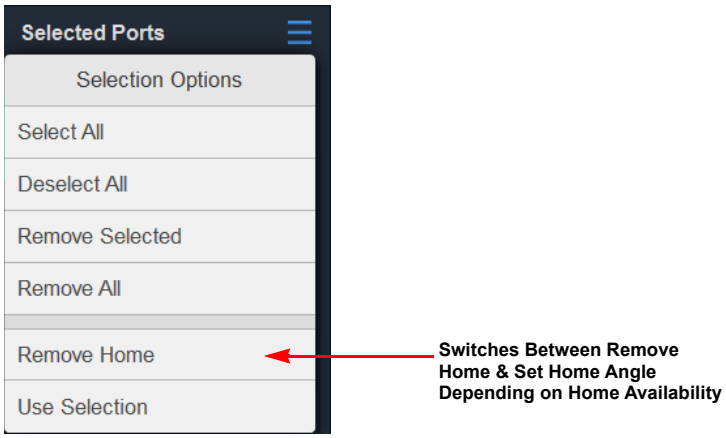


Fig. 1-33: Live Selection Options Menu

Closing the Live Ports

You can stop using a live port or ports, if necessary, from the **Live** tab of the Home screen as follows:

1 Select the active live port(s) you want to close.

Selected ports are identified by a blue check-mark.

2 Tap at the bottom of the In Use pane or select **Close Selected** / **Close All Monitoring** from the Selection Options menu.

This opens the **Stop Monitoring?** or **Stop All Monitoring?** popup.

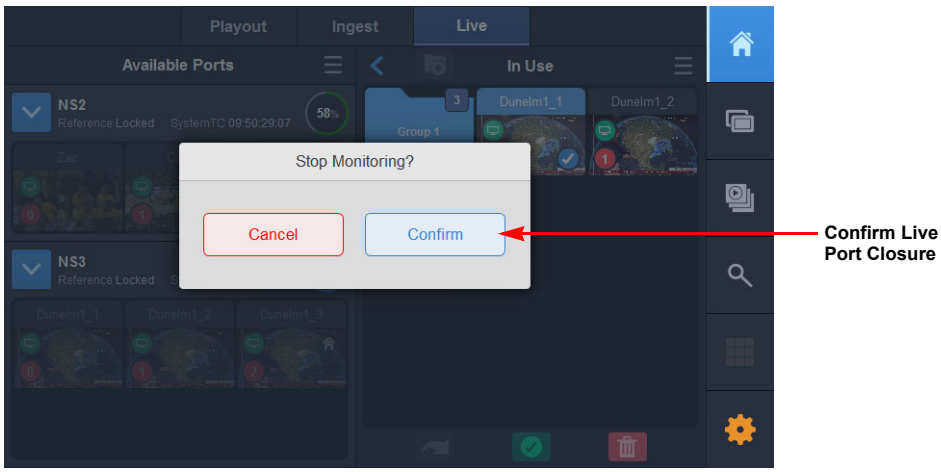


Fig. 1-34: Confirming the Closure of Live Ports

3 Press Confirm to confirm the port closure(s).

The live feed is removed from the port window and the live feed is made available for selection in the Available Ports pane.

For more information, see *Switching Playout Ports in the Playout Tab*, on page 104.

2 Understanding the Panel Controls

Layout of the LiveTouch Panel Controls

Overview

The LiveTouch Panel was designed to meet the rigorous demands of live sports production and is used to control playback of media on the LiveTouch output. It features a slow-motion T-bar for precise control of the playback speed and a jog / shuttle wheel for fast and accurate record and clip navigation. A number keypad allows rapid access to recordings, clips and playlists using a standard library numbering scheme.

Jog Wheel

The LiveTouch Jog Wheel provides accurate, dynamic navigation of recordings, clips and playlists and features three settings Jog, Fast Jog and Shuttle, providing a range of control speeds.

High-precision T-bar

The LiveTouch T-Bar allows dynamic speed playback of media on playout. You can use the T-bar in one of two selectable modes as follows:

Default mode: Provides a standard speed range of 0-100% and initiates clip playback immediately when the T-Bar is moved into the active range. You can set dead bands at the top and bottom of the T-bar range to allow for slight movement at either end without causing playback.

Alternate T-Bar mode: Toggled on and off using the panel keys, touchscreen or Desktop and provides a configurable speed range between -400 and +400%. Again, you can set dead bands at the top, bottom or ends of the range. Negative values in the Alt T-Bar range trigger reverse playback.

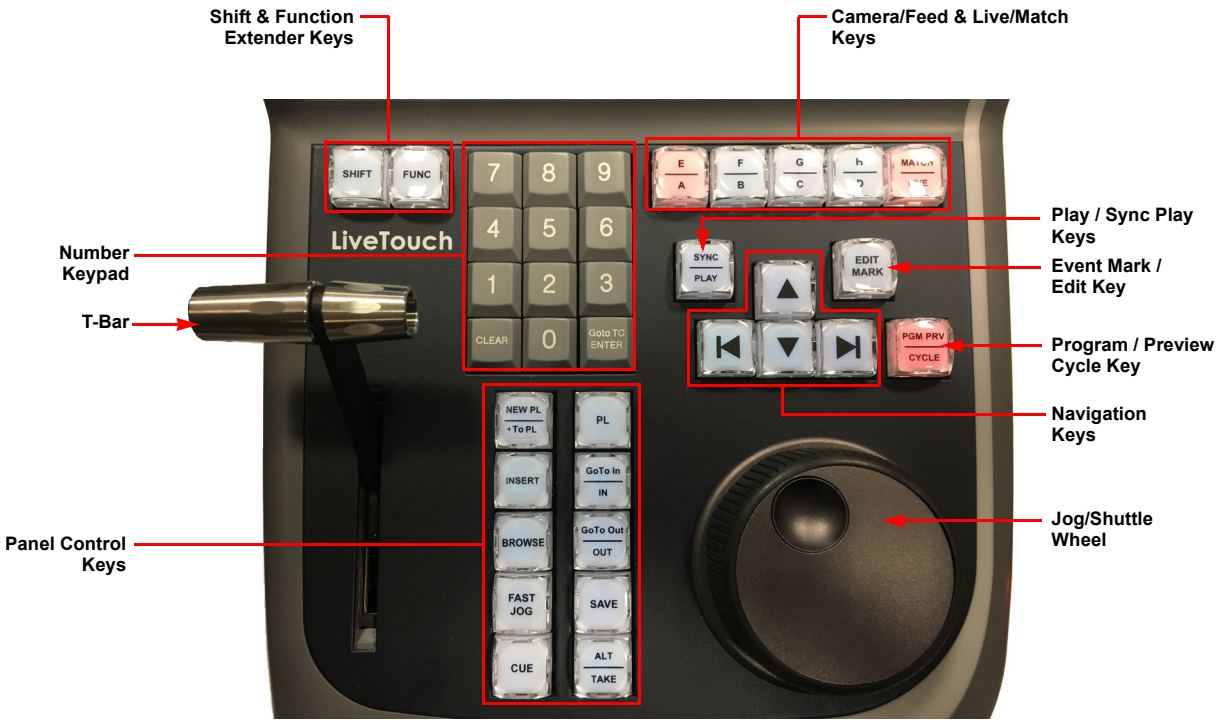


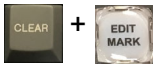
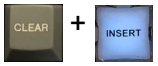
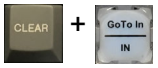
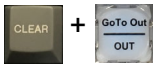
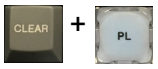
Fig. 2-1: Keys and Controls on the LiveTouch Panel

Numeric Keypad Keys

The keys of the numeric keypad have the following functions:

Item(s)	Description
Number Keypad 	Use to enter numbers and/or timecodes, to provide easy navigation to cameras, timecode and library items; and adjust numeric value fields. Press any one, two or three digit number to display the numeric entry field: Press then type numbers, to display a field for timecode entry:. Up to **99** live feeds can be connected to a LiveTouch, with each feed or camera listed in a tab of the Live Feed bar on the Desktop. To switch to a live feed, press ***nn*** . Where ***nn*** is the camera number **1** to **99**.

Item(s)	Description
ENTER / **Go To TC**	Use to navigate between page, bank and slot in the clips library. Also to confirm numeric and/or timecode values, and to exit the number entry function. Some examples of navigating through the Library: **1** Jumps to **page 1** in the library **12** Jumps to **page 1**, **bank 2** in the library **123** Jumps to **page 1**, **bank 2**, **slot 3** in the library. To enter a numeric value into LiveTouch: • Type the number, then press to confirm. To enter a timecode into LiveTouch: 1 Press 2 Type the timecode without any punctuation 3 Press again to confirm. To match the timecode on the port in focus to the other port: • Press + Some examples of entering timecodes: **12345678** Jumps to timecode: **12:34:56:78** **1234** Jumps to timecode: **12:34:00:00**

Item(s)		Description	
CLEAR	Clear numeric value and/or timecode entry fields.		
	+ **MARK**		Removes the selected event mark from the timeline.
			Removes all event marks from the timeline.
	+ **SAVE**		Removes selected clips from the clips library or playlist.
	+ **INSERT**		Clears insert point from speed profile.
	+ **IN**		Clears the last in point on the active live recording.
	+ **OUT**		Clears the last out point on the active live recording.
	+ **PL**		Clears the current playlist.
			Deletes all playlists.

Shift and Function Extender Keys

The and extender keys on the panel have the following functions:

Key(s)	Description
SHIFT 	Extends access to secondary key functions (top function label on a key). Press and release the key, then press the target key to invoke its secondary function. See the individual key details for more information. In addition, holding down while using the **Jog Wheel** scrolls through the first frame of every clip in the clips library.
FUNC 	Extends functionality when used together with other keys. Press and release the key, then press the target key to invoke that function. See the individual key details for more information.

Camera Feed and Live/Match Keys

The four camera feed keys , , , and the key on the panel have the following functions:

Key(s)	Description
 	Selects the appropriate camera or feed, **A** through **H** (depending on your system configuration.) Press then the appropriate key to select the camera or feed associated with keys: **E** through **H**. In PGM/PGM Mode: • The selected camera on the PGM port in focus is lit red. • Other available keys appear blue. In PGM/PRV Mode: • The camera active on PGM is lit red. • The camera active on PRV is lit green. • Other keys are lit blue. Press **+** the appropriate camera or feed key **A** through **D** to change the angle on the clip in focus.
LIVE 	Jump to the record head position of the current camera. Press a number key <**1**>, <**2**>, <**3**>, etc. then to go live on the camera corresponding to that number. Press in Playlist mode to exit Playlist mode and go Live on the last selected camera. Press **+** to go to the Home angle source in a group.
MATCH 	Press , when in a clip, to match back to the original frame on the camera or recording.

Play/Sync, Mark/Edit and Program/Preview Keys

The Play, Mark and Program keys , and on the panel have the following functions:

Key(s)	Description
PLAY	Start playback at 100% on the selected camera and channel. If in **PGM/PRV** mode this applies to the **PGM** channel.
SYNC	Toggle synchronization (sync) on or off. Allows control of both channels together with play, jog, shuttle, and T-bar. When sync is on, the Sync icon is active both on the panel: and the Desktop: , and the key is lit green.
MARK	Add an event mark to camera or feed. Press in a clip to enter edit mode and modify the in and out points on the selected clip.
PGM/PRV	Toggle between program/program (**PGM/PGM**) and program/preview (**PGM/PRV**) modes.
CYCLE	Cycle between the play-out channels: **PGM/PGM** and **PGM/PRV**. In addition: Locks and unlocks a playout port to prevent actions on the T-bar, Jog wheel, , or keys from accidentally disturbing the play-out on that port.

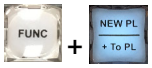
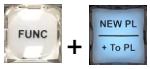
Navigation Keys

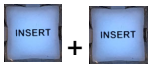
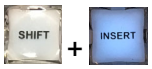
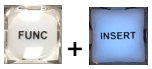
The navigation keys enable you to navigate to mark points in a feed or clip, or to defined positions in the clip library or playlist.

Key(s)	Description
	Step between the mark points on the current camera or feed, or between live clip tabs. Step between the in and out points of a saved clip. Navigate between the banks on the current page in the library.
	Move the clip selection indicator up or down in the library bank or playlist. Navigate between the pages in the library, or select clips in a playlist, depending on which is currently active. Select multiple clips in the library bank, or select clips in a playlist, depending on which is currently active.

Panel Action Bar Keys

The main block of Panel Action Bar keys have the following functions:

Key(s)	Description
+ To PL 	Appends the currently selected clip(s) to the end of the active playlist (or creates a new one if no playlists exist). ***nn* +** Adds a clip to the playlist with that number (***nn***).  Adds all camera angles of a library clip to the last active playlist as individual clips, one for each camera angle. ***nn* +**  Adds all camera angles to the playlist with that number (***nn***).
NEW PL 	Creates a new, empty playlist, or if library clips are selected creates a new playlist containing the selected clips.

Key(s)	Description
INSERT 	Inserts a clip into the active playlist at the cursor position, and moves all subsequent clips down. When in **Speed Profile mode**, inserts a keyframe at each press. For more information on the shape and duration of the profile, see the section *Setting a Variable Speed Profile for Slo-mo Playback*, on page 58.  Double-press copies the selected clip to the buffer.  Pastes the copied clip from the buffer.  Splits a clip in a playlist at the playhead position, and puts the user at the in point of the second clip. ***nnn*** **+** When in a playlist, adds clips according to the number at the active position in the playlist.
BROWSE 	Press ***nn*** **+** to navigate to the same timecode on a different camera. Hold down and rotate the jog wheel to scroll through all live recordings at the same timecode. Press **+** to open a multi-cam clip in a playlist into its individual clips; one for each camera angle. Each clip displayed as a result of this action also includes all other angles.
FAST JOG 	Toggle Fast Jog on or off. Fast jog increases the speed at which the jog wheel jogs the on-air clip, according to the Fast Jog multiplier configuration setting. The default setting (when key is bright blue) is for Fast Jog to be on. When the key is unlit Fast Jog is off. Press twice, rapidly, to put the wheel into Shuttle mode (red). You can configure the default in the panel System Configuration menu, see the section *Panel Settings: Panel Configuration*, on page 121.
CUE 	Cues a selected clip on the play-out port window. The clip also displays in the **Next Window** frame. If sync mode is active all channels are cued. When in preview, press to cue the item currently loaded on the preview channel to the program channel, and vice-versa. You can also double-tap a clip to cue it.

Key(s)	Description
PL 	Press once to open the playlist window on the active playlist, at the last active position. Press twice to jump to the top of the current playlist. Press three times to cue the current playlist from the top. In program/preview mode this cues the first clip on program, and the second in preview.
IN 	Marks an in point on the current camera or feed.
Goto In 	+ Jumps to the last in point marked on a live recording.
OUT 	Marks an out point on the current camera or feed.
Goto Out 	+ Jumps to the last out point marked on a live recording.
SAVE 	Saves the current marked event to the library. Enter a number first, e.g., ***nn +*** to save the clip to a specific numbered slot in the library. Save changes to a transition or speed profile when editing any of these for a clip. When used together with , removes selected entries from a playlist. + Opens the push menu, allowing you to push clips to other users' libraries. When using these keystrokes, choose a user and then enter a slot number in the destination library. + Pushes a clip to the previously pushed-to user in the next available slot.
TAKE 	Takes the clip on the selected channel(s). In preview mode, the clip is taken to air with a dissolve from preview to program.
ALT 	+ Toggles the T-bar alternate range on and off.

Using the Transport Controls on the Panel

The transport controls on the Panel comprise the Jog/Shuttle Wheel and the T-bar.

Using the Jog/Shuttle Wheel

Use the jog/shuttle wheel to navigate forward and backward through a live feed or saved clip.

Use the

key on the panel to toggle between standard speed or fast jogging and shuttling.

In addition, press

and rotate the jog wheel to browse though the clip library or current playlist entries.

Jogging through a Feed or Clip

Depending on the status of the

key and the speed at which you rotate the wheel, you can jog forward or backward at variable speeds as follows:

- Key lit light blue

: Standard jog speed
- Key lit dark blue

: Fast jog speed.

After a short period of inactivity the wheel effectively *locks* in position to reduce the possibility of moving the wheel accidentally. When locked, you will need to apply a stronger initial movement to release the lock, see the section *Panel Settings: Panel Configuration*, on page 121.

You can configure the jog wheel to define the number of frames of movement per revolution of the wheel.

Shuttling through a Feed or Clip

Shuttling is a faster navigation technique than jogging and can be used to navigate at high speed to get to an approximate area of a clip.

Press the

key twice to enter shuttle mode; you will see that the key changes color to red:

.

The

key returns to its default mode after a period of inactivity. You can define this fast jog timeout period in the **Jog Wheel** section of the **Panel** Settings menu.

The wheel rotates against a clutch that provides resistance. In shuttle mode speeds of ×1, ×2, ×4, ×8, ×16, ×32 and ×64 are available in both directions, depending on the amount of rotation of the wheel against the clutch.

You can set a speed multiplier for the fast jog function in the range 1 to 15 (inclusive) in the Panel Settings. See the section *Panel Settings: Panel Configuration*, on page 121.

Using the T-bar

Use the T-bar to start playing-out a cued clip, or to slo-mo part of a clip, increasing the play speed from zero. Change the position of the T-bar either to speed-up or slow-down the play-out speed of a clip, as required.

You can configure the T-bar in the in the **T-Bar** section of the **Panel** Settings menu, see the section *Panel Settings: Panel Configuration*, on page 121.

In addition, you can also configure the T-bar to switch to an alternative speed range (between -400 and +400%, depending on your configuration) if required.

To engage the alternative T-bar range, press:

then

Once activated, the alternative T-bar range remains in use until deselected, then returns to the standard T-bar range.

You can configure the alternative T-bar range in the **T-Bar** section of the **Panel** Settings menu. see the section *Configuring the Alternate T-bar Range*, on page 125.

3 Using the LiveTouch Panel

Overview of the Touchscreen Panel

The LiveTouch Panel touchscreen provides clean, instant access to your highlights library. You can navigate through your library, manage clips and playlists and interact with content using menus and a variety of touch gestures. The touchscreen is designed to execute common operations quickly and easily, while also providing sophisticated tools for multicam operation and other advanced features. Key user interfaces include:

Clips Screen **:** Displays your clips library and allows instant clip creation, organization and application of default settings. From the clips screen, you can:

- Save, copy, cut and paste clips anywhere in the clip library.
- Easily apply speed effects to a single clip entry or group of clips. Up to three default speed settings can be saved as well as the ability to build dynamic speed profiles.
- Apply audio patching to clip entries.
- Preview and switch to different angles within multi-cam groups.
- Send clips to a playlist in the Playlist Screen.

Playlist Screen **:** Provides an intuitive interface to build, manipulate and play-out highlight sequences. You can load all available camera angles of a clip, or build sequences including various events of interest. From the playlist screen, you can:

- Build and re-order playlist sequences.
- Apply effects to selected clips or an entire playlist.
- Activate, deactivate and modify transitions between clips in a playlist using the transition controls.
- Adjust audio track transitions between clips using the split audio functions.
- Manipulate a playlist sequence while playing out Live to air by moving, adding or deleting clips.
- Navigate through all playlists in the clip library.
- Preview and switch to different multi-cam angles.

Fig. 3-1: Overview of the Clips Screen Components

The touchscreen panel provides an interactive interface to operate LiveTouch together with the LiveTouch panel keys and transport controls.

Using the Panel Touchscreen Menu Softkeys

The available panel screen options down the right-hand side of the screen are as follows:

Home softkey: Provides basic information about current channels being recorded, and provides controls for program modes and general playback configuration.

Clips softkey: Displays the **Clips Library**, which stores saved clips in a structured page / bank / slot arrangement and provides quick and easy controls to play or save clips, or add them to playlists. It also provides access to clip playout controls.

Playlist softkey: Provides access to playlists and the controls to manage the playout of clips as required.

Search softkey: Provides a detailed search facility, using the web bin, to find any clips quickly and easily on the available systems. Note that the web bin address is defined in the Network tab of the Panel Settings menu.

Tools softkey: Access external applications, depending on system configuration.

Settings softkey: Access operational settings for the touchscreen, T-bar, jog/shuttle wheel and other controls.

Navigating the Touchscreen

You can navigate around the LiveTouch touchscreen using any of the following methods:

- Press a menu softkey on the touchscreen to open a different screen.
- Press other controls on the touchscreen to use a function or open a list of options, depending on the type of control.
- Swipe left or right in the library or playlist area to switch library banks or playlist tabs, respectively.
- Swipe up or down in the library or playlist area to scroll through the current library bank or playlist, respectively.

Using the LiveTouch Panel

Once you have set-up live feeds and recordings you are ready to play them out, marking important reference points to use when navigating the feed or saving clips to the library.

Marking Reference Points in the Live Recording

As the live recording plays, you can mark points of interest at any time.

To insert a mark at any point, press:

.

When you add a mark, LiveTouch displays a red bar on the timeline in the Desktop application to show its position. Reference marks are not visible in the Panel port window.

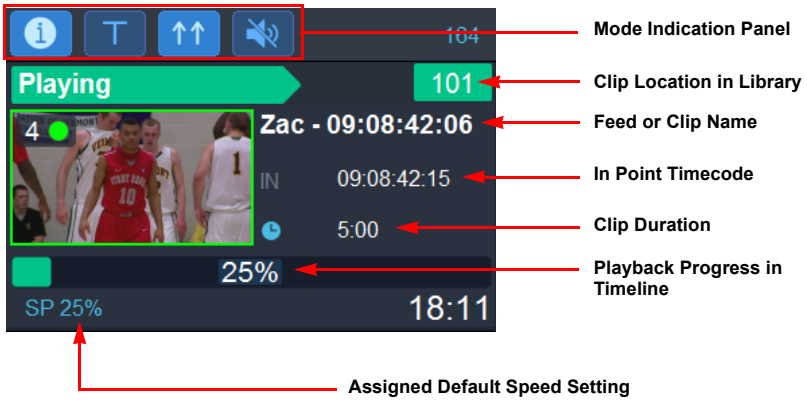


Fig. 3-2: Clip Timeline Playing on Panel

To play-out a marked event immediately, in the active port window:

- Press to go to the mark point, then press:

.

  Play starts from the reference mark and continues from that point.

Using Reference Marks to Create Clips

See Figure 3-3 on page 45 for a schematic overview of how LiveTouch saves clips from the live feeds, depending on the method you choose to save the clip. The default clip durations for the various methods available to save a clip are set in the **Clips** tab of the Panel Settings (**In Save Length**, **Out Save Length**, and **Mark Save Length**), see the section *Saving Clip Settings*, on page 119.

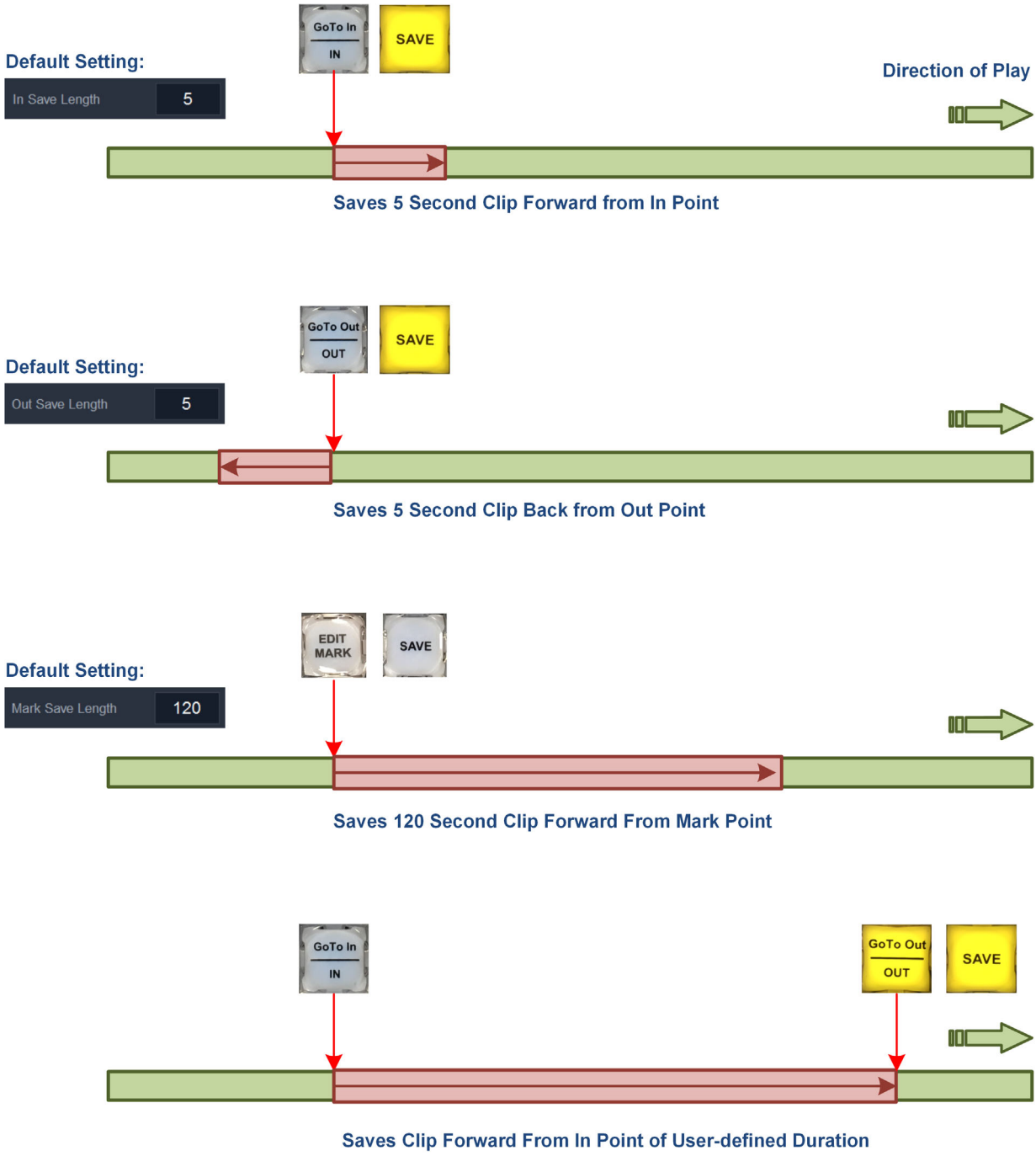


Fig. 3-3: Different Methods Available to Save a Clip Using Default or User-defined Durations

To mark and save a clip of interest quickly to the library, press: EDIT MARK then SAVE.

When you save the clip, LiveTouch uses the preset, default duration from the mark point to generate a clip of default length.

The default clip durations are defined in the **Saving** section of the **Clips** Settings menu, see the section *Saving Clip Settings*, on page 119.

Marking In and Out Points to Save a Clip

You can use the

and

keys, either on their own to mark short events with a default duration, or together to mark the beginning and end of a longer section of interest.

To mark a short duration clip either press

just before the point of interest, or press

immediately after that point.

A default duration after the **in** point, or before the **out** point determines the length of the saved clip.

Set these event durations in the **Clips** tab of the Panel Settings (In Save Length, Out Save Length, and Mark Save Length), see the section *Saving Clip Settings*, on page 119.

If necessary, you can edit the in and out points of a marked segment, as described in the following section.

You must always save the clip, defined using both

and

keys, before marking any further points, or the clip will be lost, see the section *Navigating Through the Clips Library*, on page 54.

Editing an Event Duration

If necessary, you can edit an event to change its in and out points either on-the-fly, on the live recording event, or on a clip saved in the library.

Edit the duration of an event as follows:

1 Press the

key to launch the edit mode.

2 Step to an event mark using the or keys.

3 Use the jog wheel, with the

and

keys, to set the new in and out points of the event.

4 Press

to save the edited clip back to the clips library.

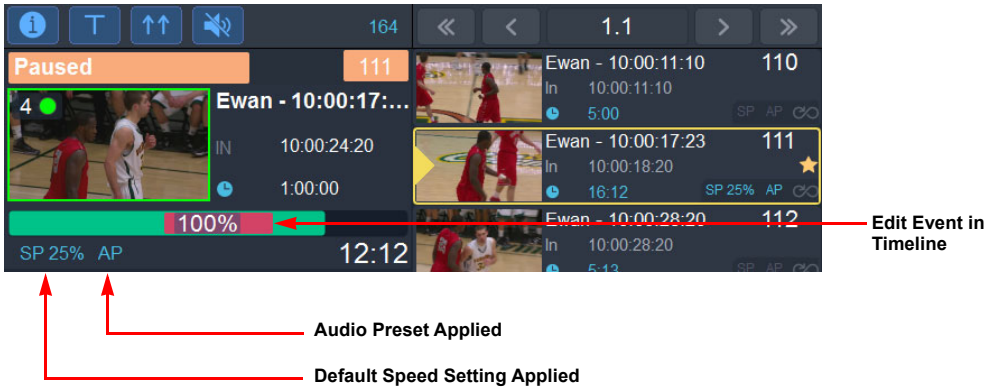


Fig. 3-4: Editing a Marked Event

To exit edit mode without making any changes, press the EDIT MARK key again.

Removing Mark Points from the Recording

To remove the current event mark on the timeline (the play head must still be in the region of the mark):

- Press CLEAR + EDIT MARK

To remove all marks on the timeline for the current event:

- Press SHIFT then CLEAR + EDIT MARK

Jumping to a Specific Timecode in a Clip

To jump to a specific timecode in an event clip:

1 Press Goto TC ENTER on the panel.
A numeric input box opens:

2 Enter a timecode value using the keypad on the panel.

3 Press Goto TC ENTER to confirm the timecode and jump to that position in the clip.

To remove the numeric box without entering a timecode value, press

again.

The following sections provide an overview of some of the tasks you can perform on the panel. For more detail, see the associate cross-references provided.

Working with the Clips Library

Overview

The LiveTouch clips library screen enables you to create and organize your clips and to apply default settings.

From the LiveTouch clips library screen, you can:

- Create and save clips to any location in the clips library.
- Copy, cut and paste clips from one location in the clips library to another.
- Apply play-out speed effects to a single clip, or group of clips.
- Choose from up to three pre-configured, default speed effects, or build a dynamic speed profile to apply to a clip or group of clips.
- Apply audio patching to clips.
- Preview and, if desired, switch to different camera angles in multi-cam groups.
- Send clips to a playlist.

Saving Clips to the Library

A number is assigned to each saved clip, either automatically, using the next available slot (as indicated at the top of the screen, immediately to the left of the library navigation controls), or manually, at the point of saving, by entering the number of a target slot before pressing:

.

The clips library contains a total of:

- Nine **Pages** (**1** to **9**)
- Each **Page** having ten **Banks** (columns) (**0** to **9**)
- Each **Bank** having ten **Slots** (**0** to **9**).
- Allowing up to **900 Clips** to be saved so that each clip has a unique numeric identifier (from **100** to **999**).

The clip number comprises three digits, from **100** through to **999**, with each digit referring to a specific location in the library.

The clip numbering syntax is [**Page**][**Bank**][**Slot**]. For example:

- **Clip 111** - the clip is stored on Page **1**, in Bank **1**, Slot **1**
- **Clip 635** - the clip is stored on Page **6**, in Bank **3**, Slot **5**
- **Clip 707** - the clip is stored on Page **7**, in Bank **0**, Slot **7**

> Note: It can be useful, for ease of access, to save related clips on the same page or in the same bank.

Figure 3-5 on page 50 shows a schematic overview of the various locations in the clips library.

If configured, LiveTouch can save clips automatically to a numbered page corresponding to the live recording tab from which they are saved. For example, a clip saved from the live feed on **Tab 3** is saved in the next available slot in **Page 3**.

To enable this form of paged saving, select the **Clip Page Matches Source** checkbox in the **Location** area of the **Clips** Settings menu, see the section *Panel Settings: Clips Configuration*, on page 119.

When saving a clip from a live recording ***group***, LiveTouch saves all camera angles in the group in the same library slot.

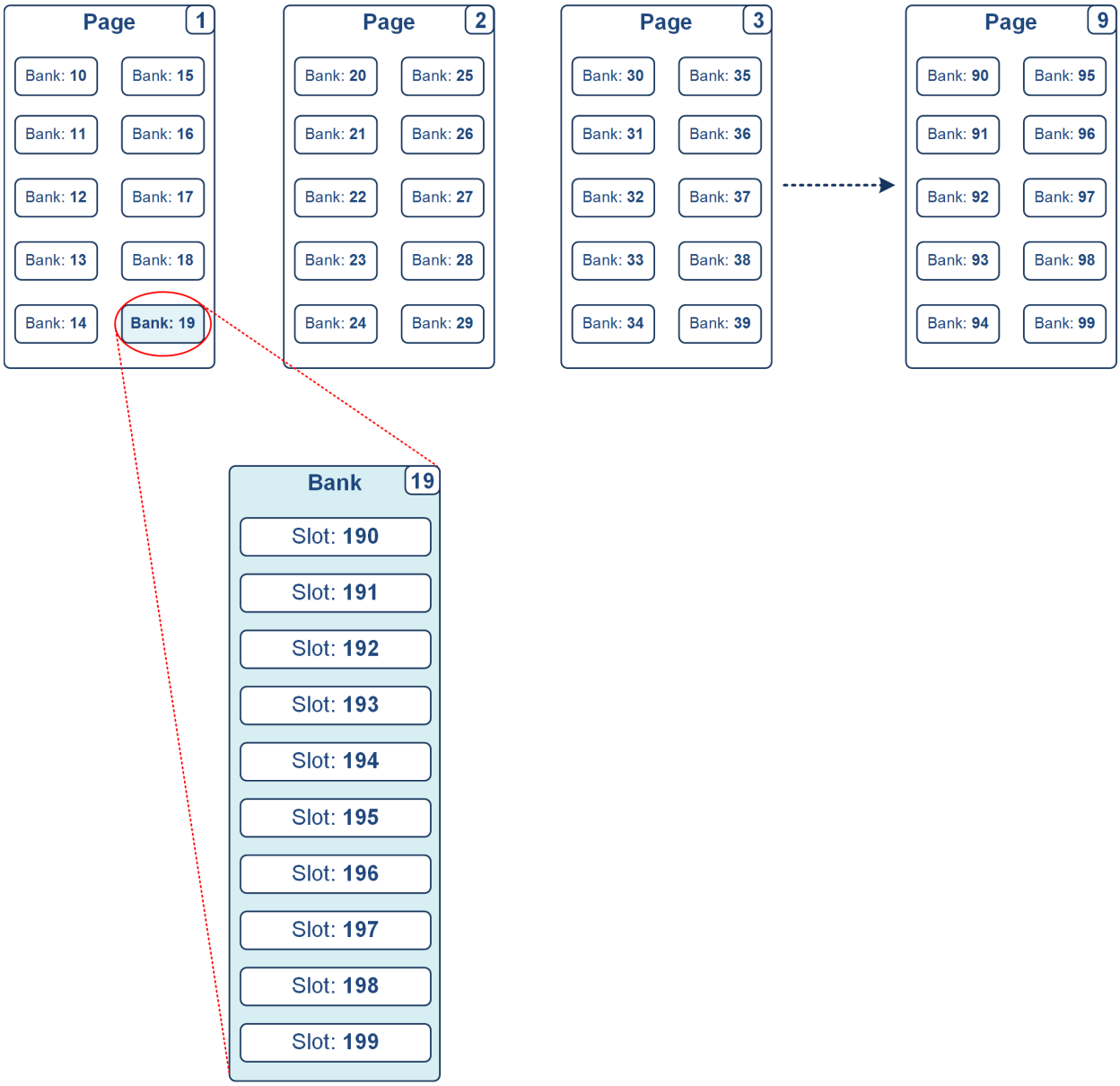


Fig. 3-5: Schematic Overview of Pages, Banks and Slots in the Clip Library

Using the Clips Library Display

To display the clips library screen:

- Press .

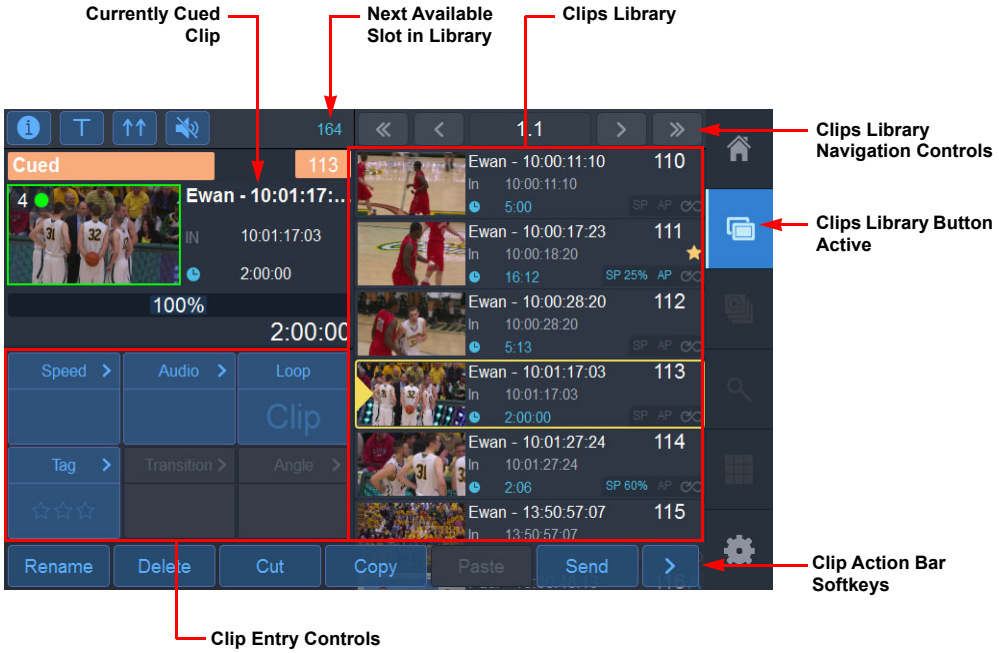


Fig. 3-6: Clips Library Screen Components

The top-left of the clips library screen displays either the currently playing clip, or the next cued clip.

Fig. 3-7: Top Row of Panel Keys, Including Navigation Controls

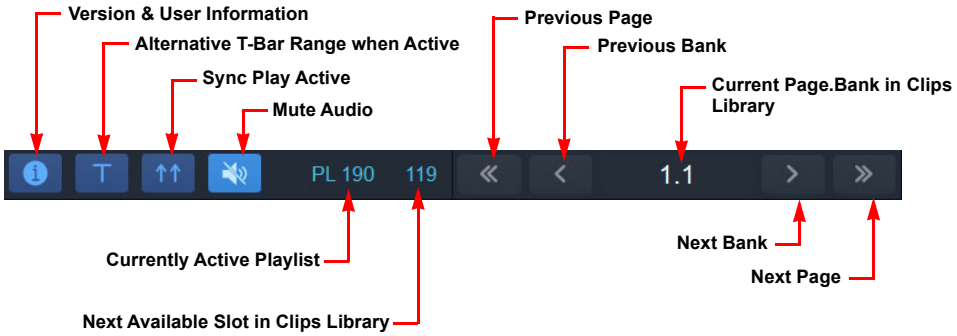


Fig. 3-8: Top Row of Panel Keys, Including Navigation Controls

The right-hand side of the screen displays the clips library view and library navigation keys.

The library lists saved clips and displays them by bank, in numerical order within the bank, as described in *Navigating Through the Clips Library*, on page 54.

The boxes in the bottom-left corner provide clip entry control including speed profiling, audio patching and looping.

In addition, you can use the action bar along the bottom of the screen to move clips to different locations in the library, see the section *Navigating Through the Clips Library*, on page 54

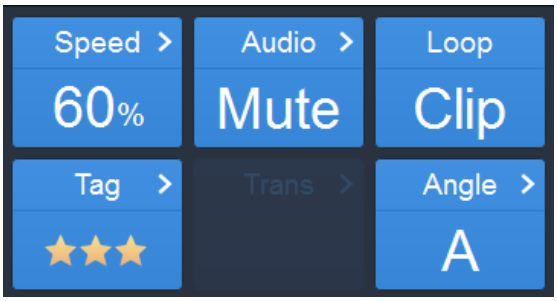


Fig. 3-9: Panel Clip Entry Controls

You can edit any clips saved in the clips library. To do so, jog backward or forward through a clip and press the

and

keys to change the In and Out points in the clip.

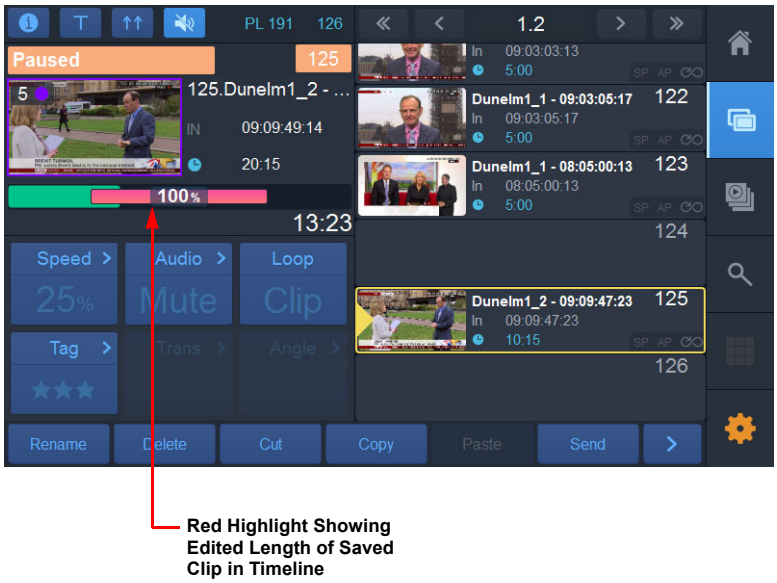


Fig. 3-10: Editing the In and Out Points of a Saved Clip

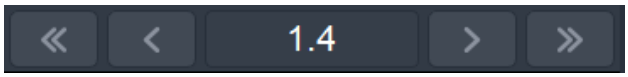
To access the tails of a clip, press

and define new in and out points, then press

.

Navigating Through the Clips Library

Navigate through the clips library using the navigation keys at the top of the screen.



The navigation keys have the following functions:

- Go to the previous bank.
- Go to the next bank.
- Go to the previous page.
- Go to the next page.
- 1.4 Shows the current location in the library in the form: **Page.Bank**. For example, **1.4** equates to page **1**, bank **4**.

Swipe up or down in the library area of the Panel touchscreen to scroll through the slots of the current bank.

Swipe left or right on the Panel touchscreen to scroll though the banks of the current page. In addition, you can also navigate through the clips library using the following methods:

- Enter the three-digit number of the specific slot (if known) then press Goto TC ENTER.
- Press FUNC then ▲ or ▼ to move to the previous or next Page, respectively.
- Press FUNC then ⏮ or ⏭ to move to the previous or next bank, respectively.

Pushing a Clip to Another LiveTouch User

To push a clip to another LiveTouch user:

1 Press SHIFT + SAVE on the LiveTouch panel.

This opens a dialog box listing all other LiveTouch users.

2 Touch a user and enter a slot number.

3 Press FUNC + SAVE to push a clip automatically to the previously selected user and the next available slot after the last slot used in the push.

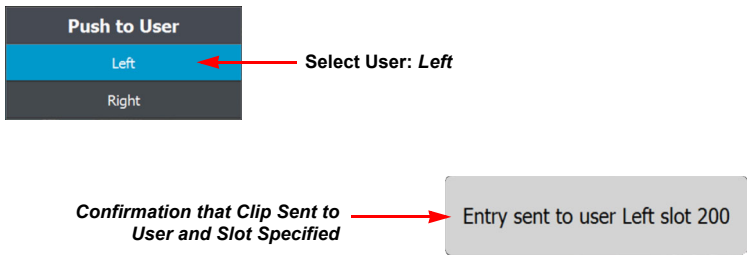


Fig. 3-11: Pushing a Clip to Another User

Selecting a Clip

To select a clip for further actions:

- Tap a slot in the library to select the clip.

  A yellow border indicates the current slot position and selected clip. Several selected clips, are identified with a pale background to the slot(s).

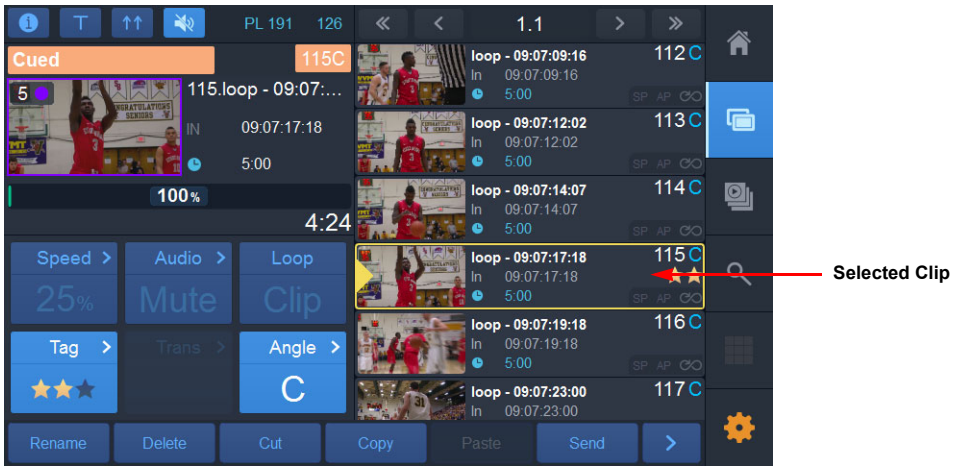


Fig. 3-12: Selecting a Clip in the Clips Library

To select a series of consecutive clips:

- Press on the first clip, press SHIFT then press on the last clip in the series.

  This selects all clips between the first and last clip, inclusive.

To select several non-consecutive clips:

- Press on one clip, press FUNC then press on each of the other clips required.

Using the Action Bar in the Clips Library

The action bar at the bottom of the screen provides **Rename**, **Delete**, **Cut**, **Copy**, **Paste** and **Send** softkeys, to manage individual clips, or groups of clips in different parts of the library.

Press › to toggle the action bar between Action mode and Timeline Step-through mode:

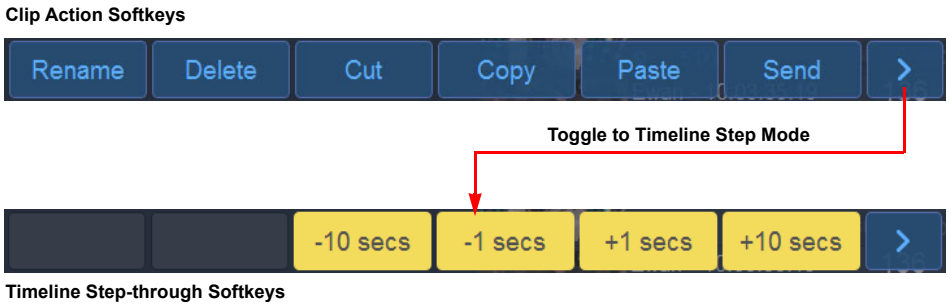


Fig. 3-13: Action Bar for Managing Clips and Selecting Timeline Intervals

Use the Timeline Step-through softkeys to step forward or backward along the timeline at the pre-set intervals (-10, -1, +1, +10 seconds.) To set the intervals for the timeline step softkeys, see the section *General User Settings*, on page 116.

Using the Clip Entry Controls in the Clips Library

Use the clip entry controls on the left-hand side of the screen, below the current play clip, to adjust the individual characteristics of your clips.

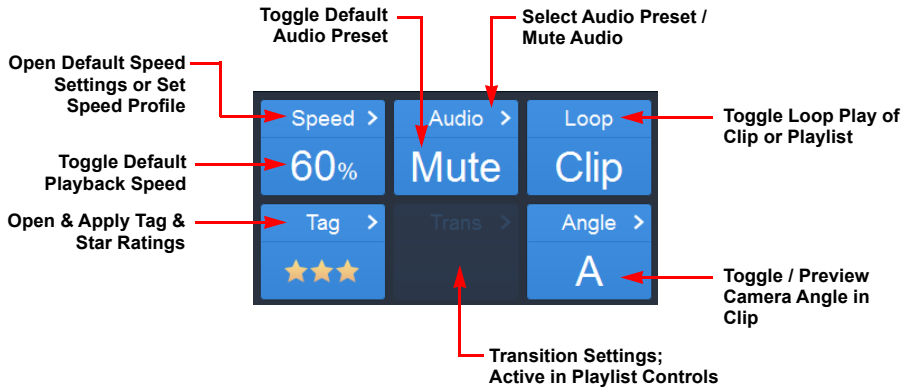


Fig. 3-14: Clip Entry Controls

Setting the Default Speed for Slo-mo Playback

You can set a default playback speed to slo-mo a particular clip, each time it is played. LiveTouch displays the default playback speed as a percentage in the lower two-thirds of the **Speed** box.

To apply the default playback speed:

1 Select a clip (or several clips if they are to be set to the same playback speed).

2 Press the lower section of the Speed box displaying the speed percentage, for example, **60%**.

This applies the default playback speed without opening the **Speed Settings** options.

You will see the label **SP *n*%** highlighted in the clip details for the Clip(s) assigned the default speed setting, where ***n*%** is the percentage of full speed, for example, **60%**.

Setting a Constant Speed for Slo-mo Playback

You can set a different (non-default) playback speed to slo-mo a particular clip, at a steady rate, each time it is played.

To set a constant slo-mo speed:

1 Select a clip (or several clips if they are to be set to the same speed).

2 Press Speed > .

This opens the preset **Speed Settings** box:

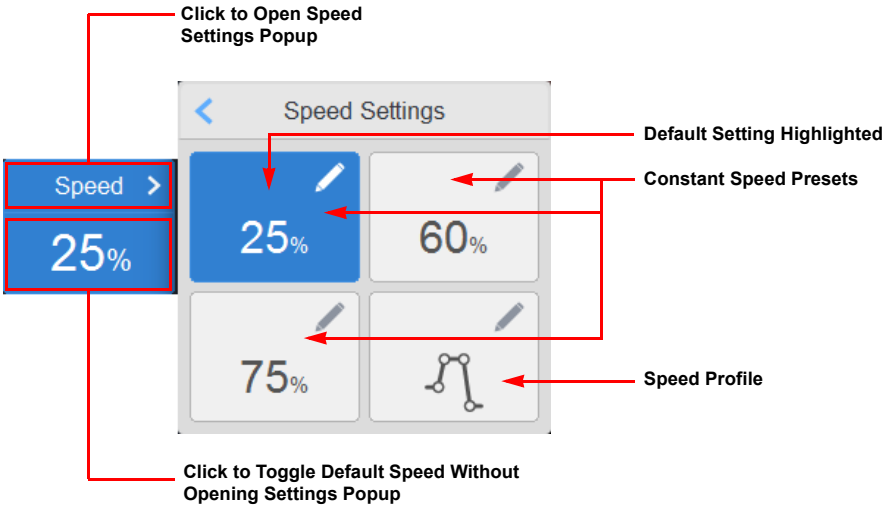


Fig. 3-15: Preset Speed Settings

3 Select one of the three available preset speeds to apply to the selected clip.

For example, **25%**, **60%** or **75%**.

This automatically closes the **Speed Settings** box and assigns the selected constant speed setting to the clip(s).

You will see the label **SP *n*%** highlighted in the clip details for the Clip(s) assigned the default speed setting, where ***n*%** is the percentage of full speed, for example, **25%**.

Fig. 3-16: Speed Setting Applied to Clip

Changing the Default Setting of a Preset Slo-mo Speed

To change the default value of a preset speed box, when the required speed is unavailable in the preset boxes:

1 Press Speed > to open the Speed Settings options.
2 Press on the speed preset box containing the default speed setting you want to modify.
This opens the numeric keypad.
3 Enter a new speed percentage value using the numeric keypad.
4 Press Confirm to save the speed change.
The Speed Settings box closes automatically.

Setting a Variable Speed Profile for Slo-mo Playback

To set a speed profile for variable speed playback:

1 Select a clip (or number of clips if they are to be set to the same profile).
2 Press Speed > to open the Speed Settings options.
3 Press the **Profile** option: .

This opens the speed profile popup enabling you to define a suitable speed profile for the selected clip using the T-bar and jog wheel on the panel to move to points of interest through the clip.

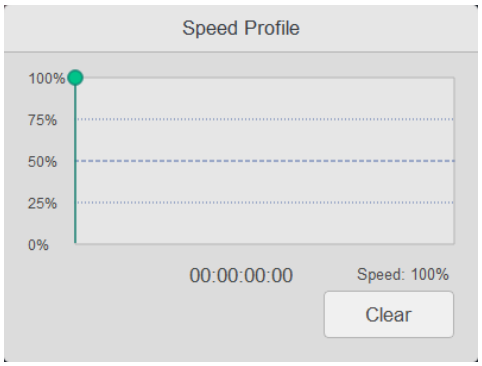


Fig. 3-17: Initial Speed Profile Popup

4 Jog to a position in the clip where the profiling is to start.
5 Set the required speed either using the T-bar, or by entering a speed value using the numeric keypad followed by Confirm.
6 Press INSERT / COPY to add a keyframe.
7 Repeat steps 4 - 6 to add as many keyframes as required for the profile.
8 Use and to step backward and forward through the keyframes in the speed profile.

9 Press

or

.

The Speed Profile popup window automatically closes.

You will see the label **SP** highlighted in the clip details for the Clip(s) assigned the speed profile.

The following example shows the steps involved in creating a half-speed (50%) profile for a section of a clip.

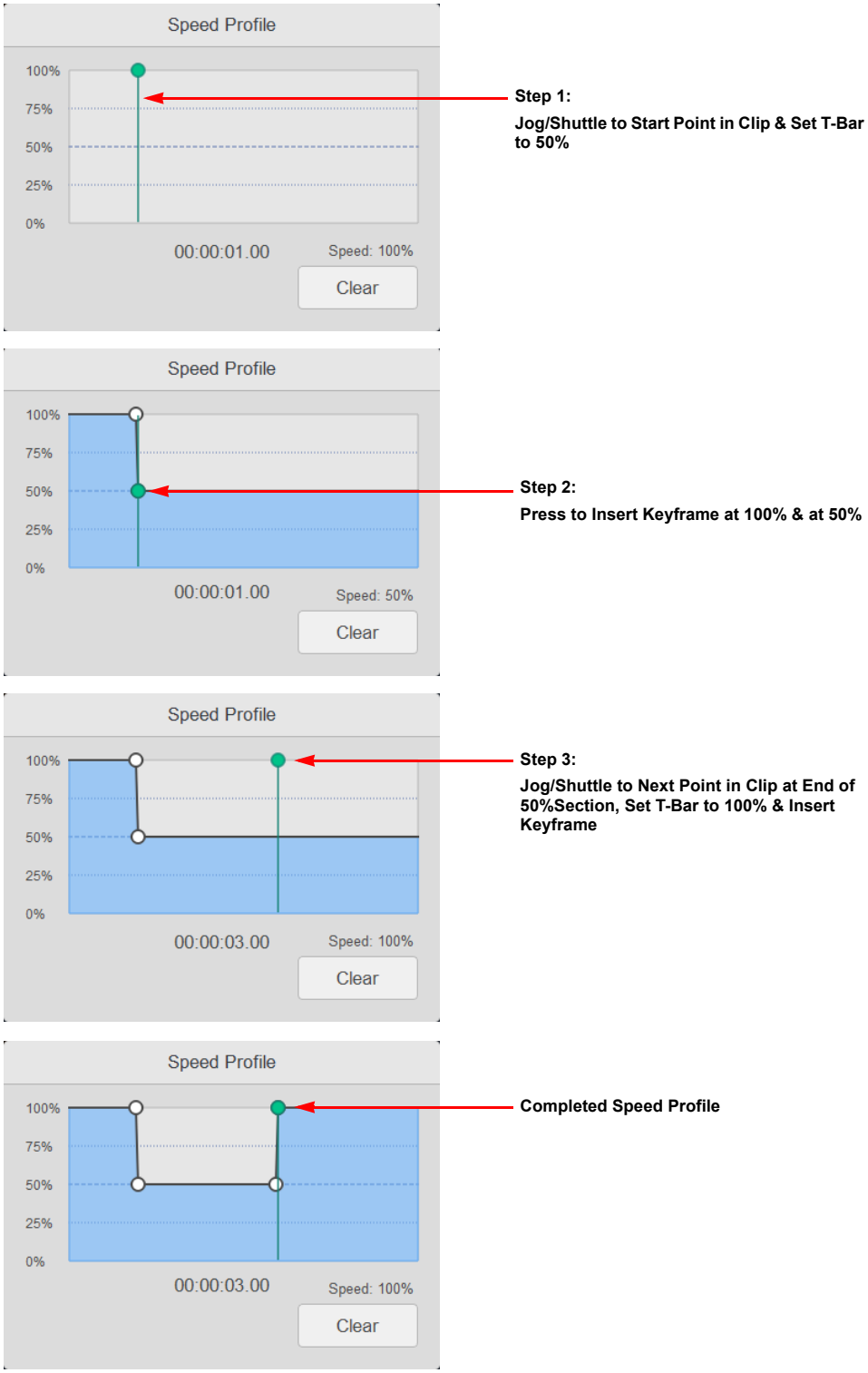


Fig. 3-18: Progress of Steps to Define a Speed Profile

Note: Setting the speed down to 0% invokes a pause that requires you to press

to restart play at 100% from this point.

A break in the profile line is shown, and the next frame is automatically inserted at 100% play speed.

You can add multiple pauses to a clip, as required. If you do so, the color of the line immediately after each pause changes. The colors alternate between light-blue and a darker-blue to make the start and end of each pause clearly visible.

To delete individual keyframes from a profile:

- Use and to step backward and forward through the keyframes, and press

+

to remove the currently selected keyframe.

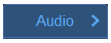
To remove the entire, current speed profile:

- Press **Clear** displayed in the bottom right of the Speed Profile window.

Assigning Audio Patching Options

Before selecting an audio patch setting, you first need to define the audio patches, see the section *Defining Audio Presets Using the Desktop*, on page 143. The default audio presets are displayed when you select the **Audio** control.

To set an audio patch for the currently selected clip(s), either select the default displayed in the lower section of the **Audio** box, or:

1. Select a clip (or number of clips if they are to be assigned the same audio patching option).
2. Press 

.
This opens the Audio Patching popup, displaying the available audio patching options.

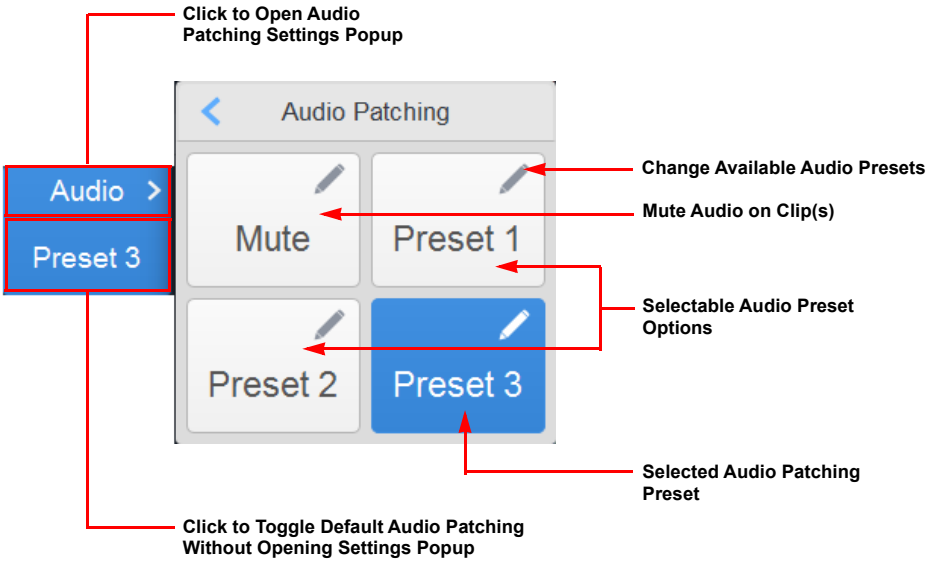


Fig. 3-19: Audio Patching Popup

3 Select the required patch setting (any of the audio presets or the mute option) from the popup.

4 You will see the label **AP** highlighted in the clip details for the Clip(s) assigned the audio patching preset.

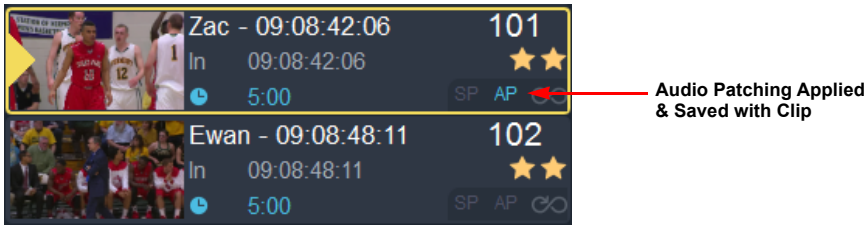


Fig. 3-20: Audio Patching Applied to Clip

Changing the Available Audio Patching Options

You can change the audio patching options available in the audio patching popup by pressing the edit icon displayed in the top-right corner of each option.

This opens the Change Audio Preset popup (see Figure 3-21), listing the available options. Choose a different audio preset from the list, if required, and LiveTouch adds the option to the audio patching popup menu. The Change Audio Preset popup lists all audio presets saved when defining Audio Patching in the Audio section of the User configuration, see section *General User Settings*, on page 116.

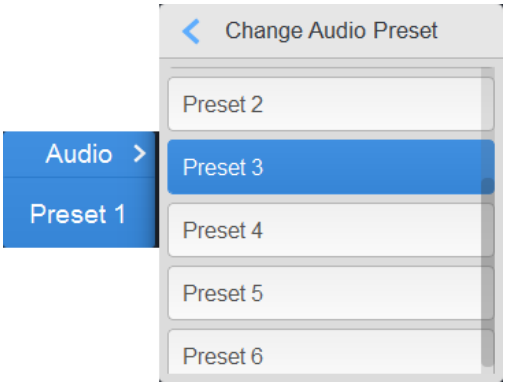


Fig. 3-21: Changing Available Audio Presets

Assigning the Loop Function to a Clip or Clips

The **Loop** function enables you to loop play clips or groups of clips in the library.

To loop a clip:

1 Select the clip or clips to be looped.

2 Press Loop.

You will see the loop icon highlighted in the clip details for the Clip(s) assigned the Loop function.

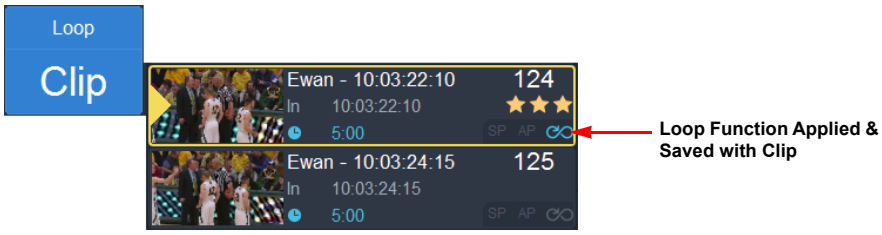


Fig. 3-22: Loop Function Applied to Clip

You can also loop a playlist or individual clips included in a playlist, see the section *Assigning the Loop Function in a Playlist*, on page 75.

You can also assign the looping function from the Desktop, see the section *Looping a Clip*, on page 167.

Applying Star Ratings and Tagging Clips

Applying a Star Rating to a Clip

When using the LiveTouch Panel you can assign from one to three stars to a clip using the Tag control: Tag ›.

Assign a star rating to a clip as follows:

1 Select the clip or clips to be assigned stars.

2 Press Tag ›.

This opens the Tagging Options window.

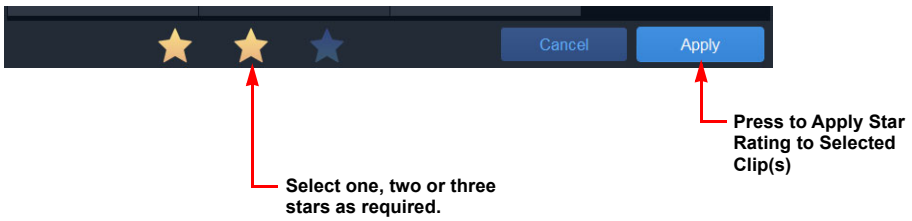


Fig. 3-23: Applying a Star Rating to a Clip or Clips

3 Press one, two or three stars as required, then press Apply.

You will see the assigned number of stars saved in the clip details for the selected Clip(s).

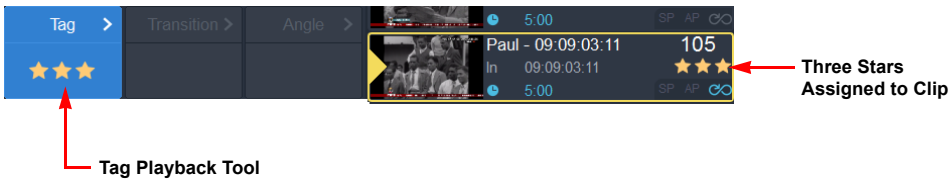


Fig. 3-24: Three Stars Applied to Selected Clip

Applying Event Tags to a Clip

Assign an event tag to a clip as follows:

1 Select the clip or clips to be assigned tags.

2 Press Tag ›.

This opens the Tagging Options window.

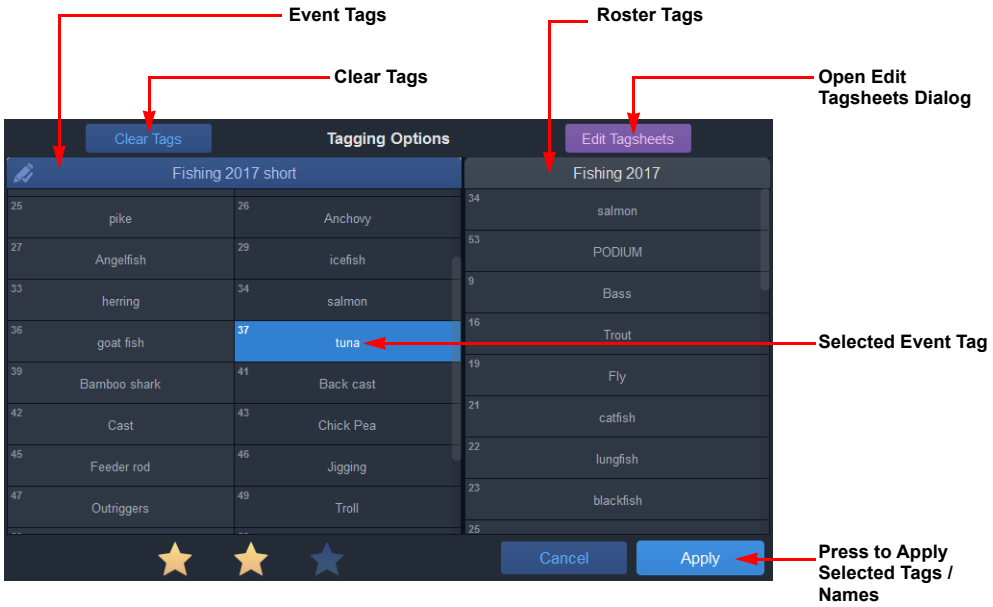


Fig. 3-25: Selecting Event Tags and Roster Names to Apply to a Clip

3 Select event tags and/or roster names from the available lists as required, then press Apply.

You will see the selected tags saved in the clip details for the selected Clip(s).

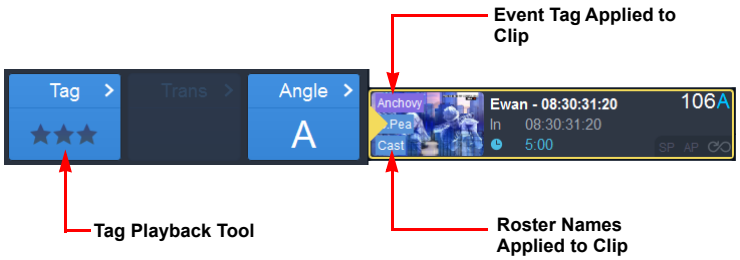


Fig. 3-26: Name & Event Tags Applied to Selected Clip

If you select multiple clips in the main user interface, and then open the tagging menu, those tags currently used by **all** selected clips are highlighted bright blue and any tags applied to some clips, but not all, are highlighted dark blue.

If you would like to remove all tags from the selected clip(s), press Clear Tags then **Confirm**.

For information on user rules and loading tag sheets or roster files, see the *LiveTouch Installation Guide*.

Editing Tagsheets

Press Edit Tagsheets to open the Editing Tagsheets dialog:

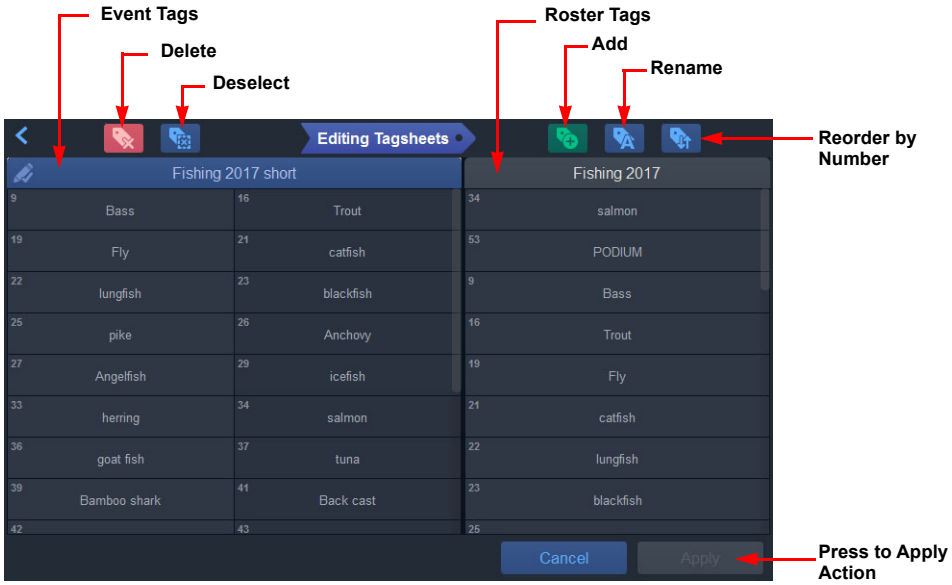


Fig. 3-27: Editing Tagsheets Page

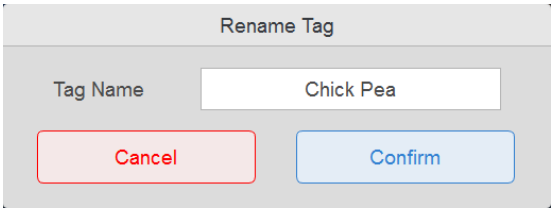
The available tagsheet function softkeys along the top of the screen are as follows:

Delete Selected: Delete selected tags from the active tagsheet.

Deselect Selected: Deselect any tags selected in the active tagsheet.

Add Tag: Add a new tag to the tagsheet. Opens the New Tag dialog and soft keyboard:

Rename Tag: Rename the selected tag. Opens the Rename Tag dialog and soft keyboard:



Reorder by Number: Restores the original numeric order of tags in the tagsheet if you have changed the order of tags in the tagsheet.

You can drag a tag or multiple selected tags to new positions on the tag sheet as follows:

1 Select the tag or tags you want to move.

2 Touch and hold on the touchscreen, then drag the selected clip(s) and drop into their new location.

You will see a yellow border around the clips as you move them to the new position.

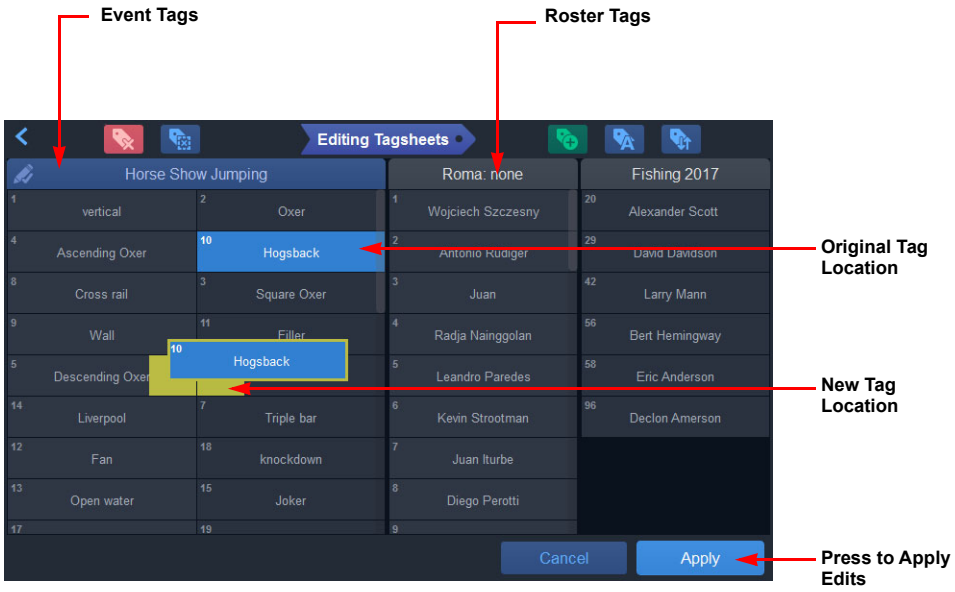


Fig. 3-28: Dragging Tags to New Position in Tagsheets Page

Clip Transitions Function

The Transitions function in the clip entry controls is used to add crossfade transitions between clips in a playlist, if required. Transitions are not available for use in the clips library, see the section *Editing Transitions Between Clips in a Playlist*, on page 79.

Previewing and Changing the Camera Angle for Multi-cam Recordings

You can define multi-cam groups when setting-up the live recordings, see the section *Grouping Multiple Camera Angles in Live Recordings on the Desktop*, on page 147.

The **Angle** control enables you to:

- Preview the different camera angles saved with a multi-cam clip in the port window, and/or
- Change the default camera angle saved with a multi-cam clip.

Previewing the Camera Angle for Multi-cam Recordings

Use the **Angle** control to preview the different camera angles saved with a multi-cam clip as follows:

1 Select the multi-cam clip and press the Angle box.

This opens the Angle Selection panel, containing thumbnails for all camera angles saved with the clip.

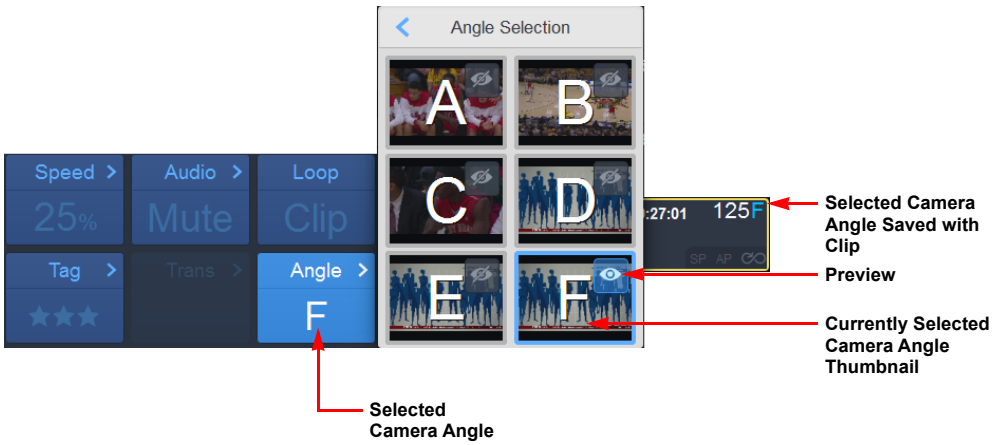


Fig. 3-29: Switching the Default Camera Angle on Panel

2 Select the Preview icon for the camera angle you want to preview, usually: **A - F**, depending on the size of the multi-cam group.

The preview will show in the port window (and on the Desktop).

3 If necessary, preview any of the other camera angles.

Either close the Angle Selection box at this point to retain the original camera angle, or select the thumbnail of one of the other camera angles to save that with the clip as described in *Changing the Selected Camera Angle for Multi-cam Recordings*, below.

Fig. 3-30: Previewing Different Camera Angles

Changing the Selected Camera Angle for Multi-cam Recordings

Use the **Angle** control to change the selected camera angle saved with a multi-cam clip as follows:

1 Select the multi-cam clip and press the Angle box.

2 Select the required angle by pressing one of the available camera angle boxes: **A - F** (depending on the number of live feeds in the group.)

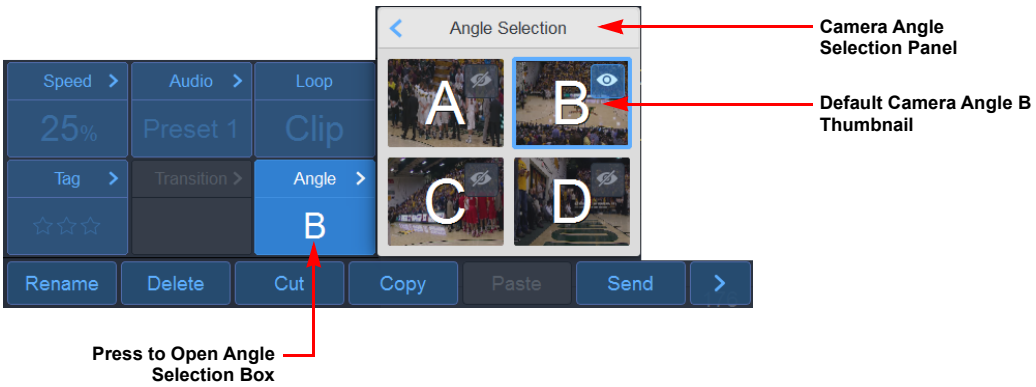


Fig. 3-31: Switching Recording Angle on Panel

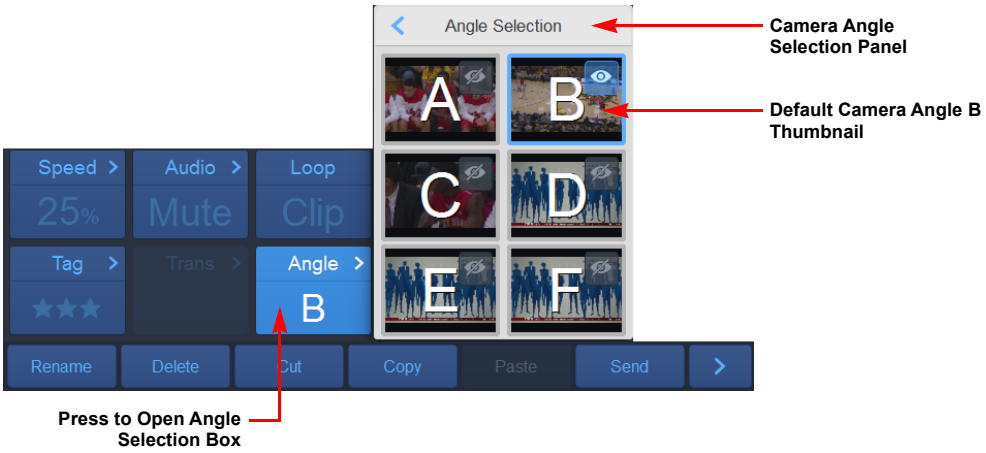


Fig. 3-32: Switching Recording Angle on Panel

This changes the default camera angle of the clip and automatically closes the Angle Selection panel.

The Angle Selection panel may display up to eight grouped camera angles, depending on the size of the multi-cam group:

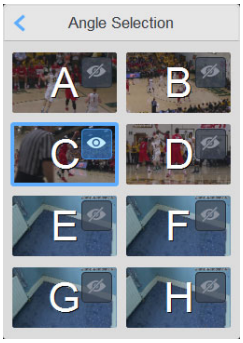


Fig. 3-33: Angle Selection Panel Displaying Group of Eight Camera Angles on Panel

Working with Playlists

Overview

The LiveTouch Playlists screen provides an interface that enables you to build, manipulate and play-out sequences of highlights. You can quickly and easily load all available camera angles of a clip or build sequences containing various events of interest.

From the Playlists screen, you can:

- Build and re-order playlist sequences.
- Apply effects quickly to selected clips or an entire playlist.
- Activate, modify, or deactivate transitions between clips in a playlist using the transition controls.
- Manipulate playlist sequences while playing-out live to air by adding, moving, or deleting clips.
- Preview, and if desired, switch to different multi-cam angles.

To open the Playlist screen:

- Press

on the panel or on the panel touchscreen.

The Playlist screen is displayed, as follows:

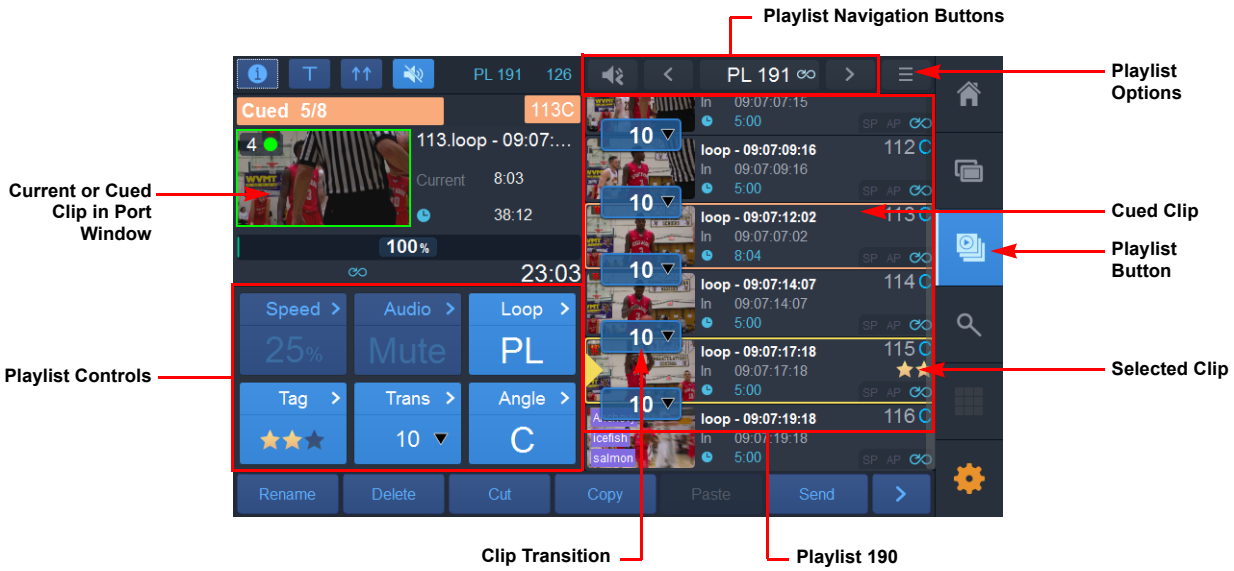


Fig. 3-34: Overview of the Playlist Screen

The port window displays the currently playing clip, or next cued clip, according to the current **PGM/PRV** (program/program or program/preview) mode.

The right-hand half of the screen displays the current playlist and playlist navigation keys.

Creating a New Playlist of Clips

Create a new playlist as follows:

1 Press SHIFT + NEW PL / + To PL.

LiveTouch creates a new empty playlist using the next available playlist number, starting at library slot **190** if no playlists currently exist.

To renumber or rename a playlist, use the Rename softkey in the Action bar.

2 Select a clip or multiple clips (e.g., using the SHIFT or FUNC keys) in the clips library, then press Send on the action bar.

Alternatively, you can first select a clip, or multiple clips, then press Send or NEW PL / + To PL and LiveTouch will create a new playlist containing the selected clip(s).

Once you have created a new playlist, you can move clips into the playlist using any of the following methods:

- If a playlist is already open:

  Select a clip or clips and press Send to append the selected clips to the bottom of the playlist.
- Select clips in the web bin and send to a playlist.
- Press ***nnn*** Send to open a new playlist numbered ***nnn***.

> Note: To send all available camera angles of a multi-cam group clip press:
>
> FUNC + Send.
>
> Each camera angle is then added to the playlist as a separate entry.

To renumber or rename a playlist, use the Rename softkey in the Action bar.

When you create a playlist, LiveTouch saves the playlist in the library slot of the same number as the playlist, starting, by default, at slot **190**. When you close the playlist, LiveTouch deletes this library item.

Fig. 3-35: Default Temporary Storage Location in Clips Library for Playlists

To split a multi-cam group clip into its component angles in a playlist, press FUNC + BROWSE.

This opens each camera angle as a separate clip in the playlist, with each clip containing all other angles saved in the multi-cam group.

To change the angle, for example, if they are not to be played-out in camera order, see the section *Previewing and Changing the Camera Angle for Multi-cam Recordings*, on page 68.

Playlist Navigation

Use the navigation controls at the top-right of the Playlist screen to navigate through and locate different playlists.

The navigation keys have the following functions:

- Launch split-audio mode.
- Exit from split-audio mode.
- Go to the previous playlist.
- Go to the next playlist.
- Open the playlist Options menu.
- PL 190 — Shows the currently active playlist in the form: **PL *nnn***. For example, where ***nnn*** is the playlist number. In addition, displays the playlist loop icon which, when highlighted as shown, indicates that all clips in the playlist will be played in a continuous loop until manually stopped.

Using the touchscreen, swipe up or down in the playlist area to scroll through the clips in the current playlist. Swipe left or right to switch to the previous or next playlist.

In addition, you can also navigate to a playlist using these alternative methods:

- Enter the three-digit number of the playlist, then press PL.

Using the Playlist Options Menu

The Playlist Options menu enables you to:

- Sort a playlist by ascending or descending timecode.
  Use to revert to the original playlist order.
- Define default transition settings for the playlist as follows:
  - Apply a transition to the video track only, the audio track only, or to both audio and video.
  - Set the transition type from:
    V-fade transition. When selected, you can also select the fade background color from a selection of swatches.

Cross-fade transition.

- Set the default duration for transitions between audio and video tracks in number of frames.

  You can use to link the two duration fields together so that the duration you enter into one field is also entered automatically into the other.

  You can adjust each transition in a playlist manually, as required.

  If you set the default transition for an empty playlist, the default applies to all clips sent to that playlist. If you set the default transition for a playlist containing existing clips, the default transition is applied only to new clips added to the list.

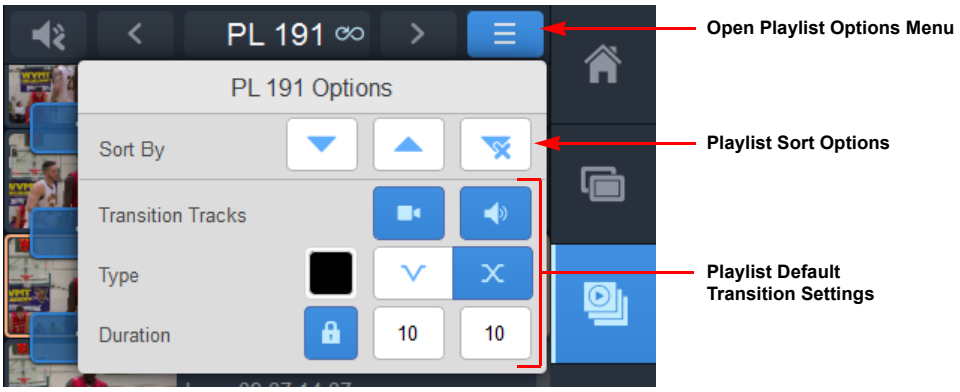


Fig. 3-36: Playlist Options Menu

Using the Playlist Controls

Use the boxes at the left of the screen, below the current play clip, to adjust either the playback characteristics of individual clips in the playlist or the entire playlist.

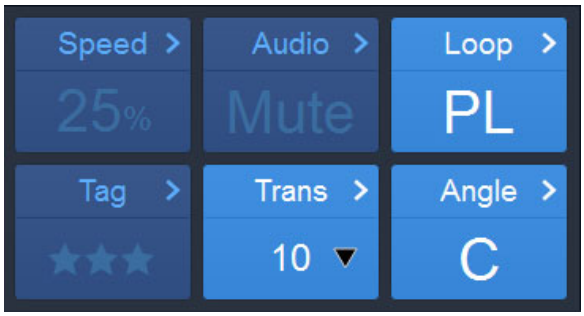


Fig. 3-37: Playlist Controls

When working with playlists any changes you make using the clip entry controls override any playback settings saved with the clips in the clips library.

Changing the Speed of a Clip in a Playlist

Change the playback speed of one or more clips in a playlist as described in the section *Setting a Constant Speed for Slo-mo Playback*, on page 57.

Setting Audio Patching for Playlist Clips

Set audio patching for clips in the playlist as described in the section *Assigning Audio Patching Options*, on page 61.

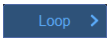
Assigning the Loop Function in a Playlist

When in a playlist, you can choose whether to loop the entire playlist, or a selected clip or sequence of clips in the playlist.

Apply the Loop function in a Playlist as follows:

1 Press to open the **Playlist** page.

2 Navigate to the target playlist to be looped.

3 Press  to open the **Loop Selection** popup.
Note the **>** symbol in the Playlist Loop key.

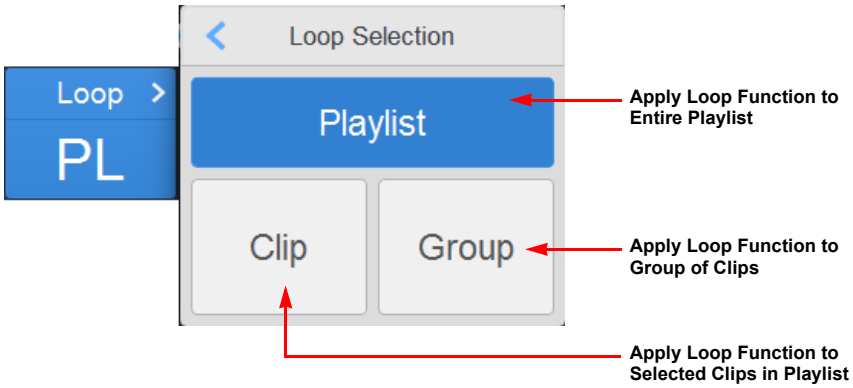
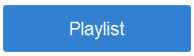


Fig. 3-38: Loop Function Applied to Clip

4 Press  to apply the Loop function to the entire playlist.

You will see the loop icon highlighted in the playlist navigation bar.

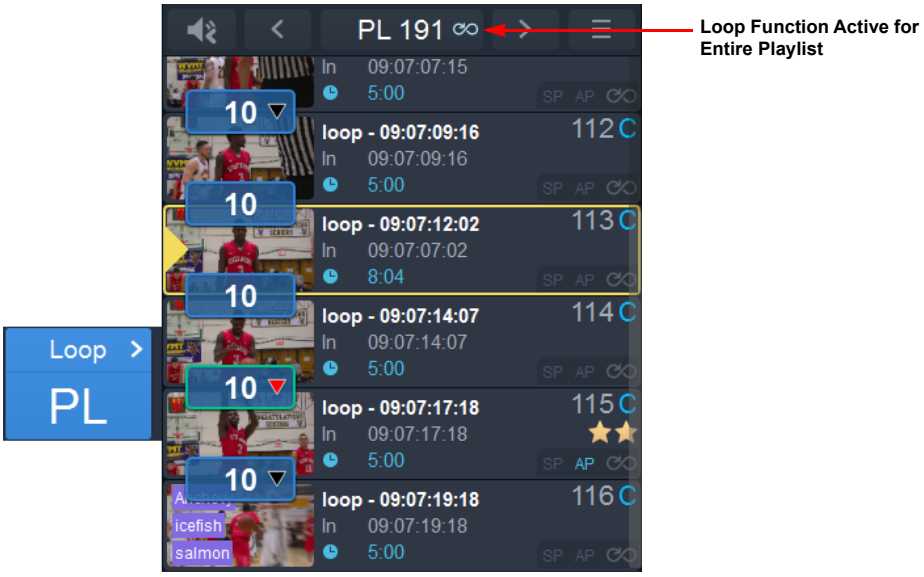


Fig. 3-39: Loop Function Applied to Entire Playlist

Assigning the Loop Function to Individual Clips in a Looped Playlist

In a looped playlist, you can also apply the Loop function to a selected clip (or clips) in the playlist so that, on reaching the clip, the clip itself loops until you press ALT / TAKE, at which point the Playlist loop continues.

To loop clips in a looped playlist:

1 Navigate to the looped playlist.

2 Select the clip (or clips) in the playlist to be looped (e.g., using the SHIFT key).

3 Press Loop to open the **Loop Selection** popup.

4 Press Clip in the **Loop Selection** popup.

You will see the loop icon highlighted in the clip details.

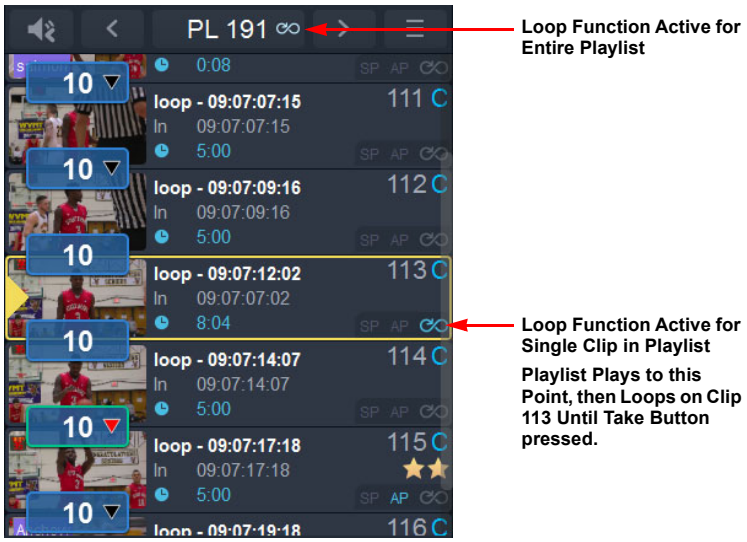


Fig. 3-40: Loop Function Applied at Clip and Playlist Level

Assigning the Loop Function to Grouped Clips in a Looped Playlist

In a looped playlist, you can also choose to apply the Loop function to a group of adjacent clips in the playlist so that, on reaching the grouped clips, the group itself loops until you press

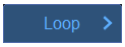
, at which point the Playlist loop continues.

To loop a group of clips in a looped playlist:

1 Navigate to the looped playlist.

2 Select the clips in the playlist to be looped (e.g., using the

key).

3 Press 

to open the **Loop Selection** popup.

4 Press

in the **Loop Selection** popup.

You will see the loop icon highlighted in the clip details, together with a green banner, displayed vertically alongside the grouped clips.

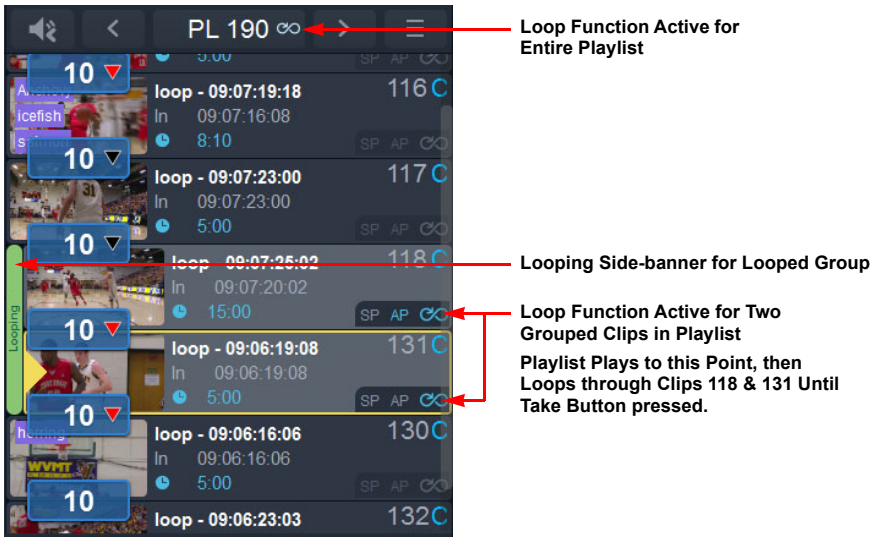


Fig. 3-41: Loop Function Applied at Group and Playlist Level

Tagging Clips in a Playlist

Apply tags and/or star ratings to clips in a playlist as described in the section *Applying Star Ratings and Tagging Clips*, on page 64.

Editing Transitions Between Clips in a Playlist

LiveTouch enables you to define cross-fade or V-fade transitions, over a number of frames, between clips in a playlist. You can apply the transition to both audio and video, or only video or audio tracks as required, see Figure 3-42.

- **Cross-fade:** Allows standard audio cross-fade mixing between clips/tracks, starting and ending at equal durations from the center point.
- **V-fade:** Allows video tracks to fade to a flash color at the point of transition before gradually returning to full video at the end of the transition. Figure 3-42.

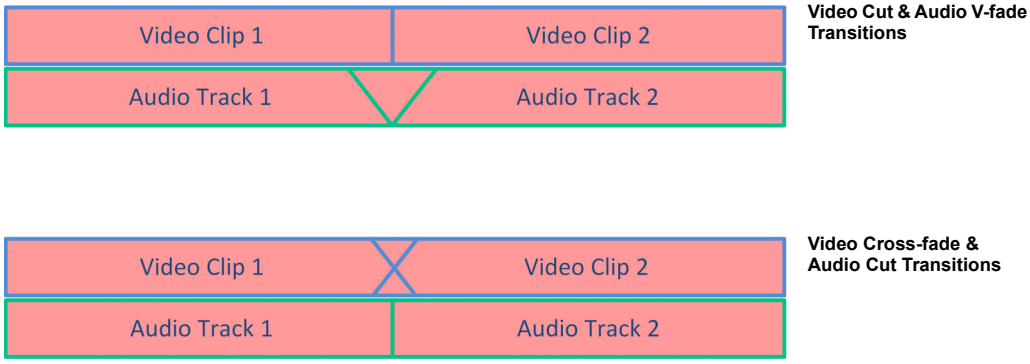


Fig. 3-42: Mixing Video and Audio Transition Types

You can edit the transitions between clips included in a playlist, either for single clips, or across a range of selected clips. The number of frames included in the current transition is displayed in a blue box between two adjacent clips in the playlist. If the box is gray and displays zero (**0**), there is no transition defined between clips.

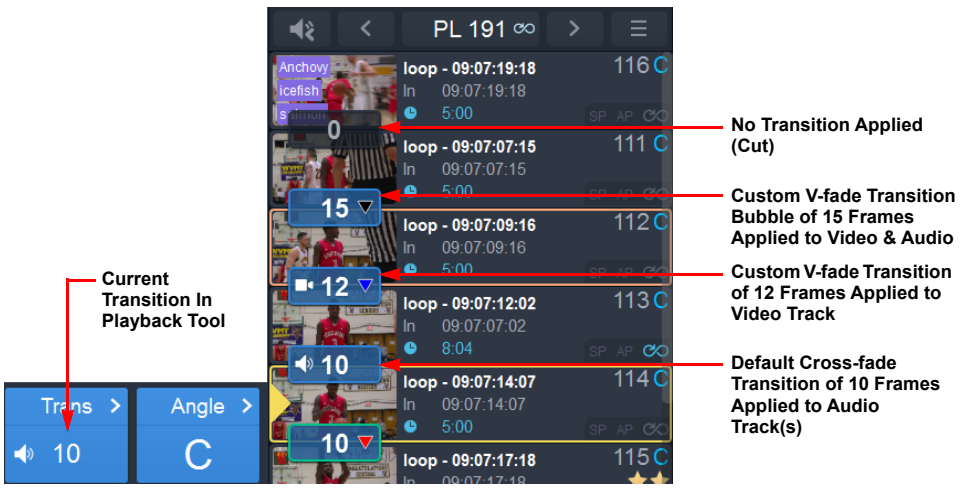


Fig. 3-43: Modifying Transitions in a Playlist

To apply one of the default transitions:

- Press Trans > and select one of the preconfigured transitions available from the Transition Settings popup.

  Once applied, a transition is shown as a blue *bubble* between neighboring clips. You can switch the transition on or off simply by touching the transition bubble.

To modify a transition between two clips in a playlist:

1 Select the second clip of the pair.

  The current transition setting is displayed in the lower section of the Transition control.

2 Press Trans > to open the Transition Settings popup.

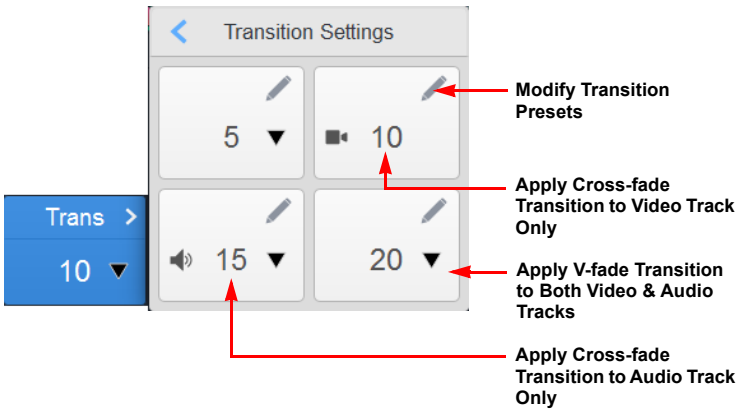


Fig. 3-44: Transition Settings Popup

3 Either select one of the preset transitions from the available popup options, or press to modify one of the presets.

  a If you choose to modify a preset, the following Transition Preset menu opens:

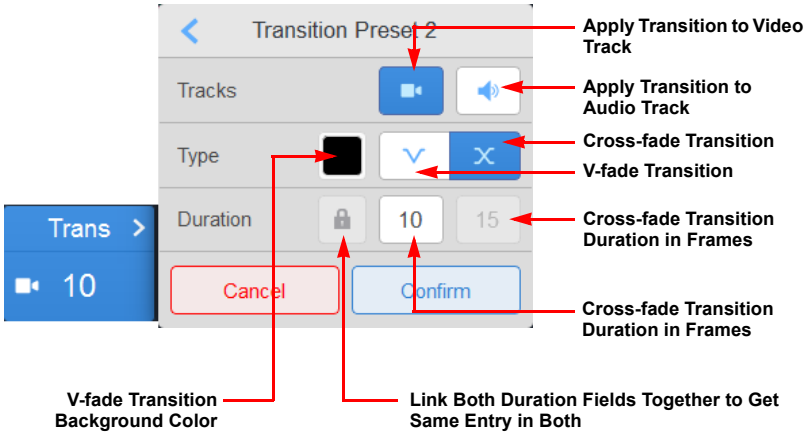


Fig. 3-45: Modifying Transition Presets

You can use this menu to apply either a V-fade or cross-fade transition to audio, video, or to both audio and video tracks. When you select a V-fade transition type, you can also set the color of the background matte for the transition. The selected color is reflected in the V-fade icon, for example:

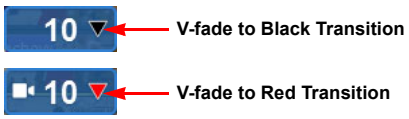


Fig. 3-46: V-fade Transition Icons Showing Different Background Matte Colors

A *cut* between clips applies either when the duration is set to **0** or when a transition is not defined for either video or audio tracks.

b Modify the transition settings as required, then press Confirm.

4 Your settings are applied to the selected transition.

Modifying Transitions in Split-audio Mode

In addition to applying cross-fade or V-fade transitions to audio tracks, LiveTouch provides **split-audio** tools allowing you to manipulate the audio transitions in a playlist independently of the video track. These tools enable you effectively to uncouple the audio track from the video track and adjust the start- and end-points of the audio track as required, within constraints. The split-audio functions enable you to increase or decrease the duration of the audio track from a preceding clip so that it overlaps video clip, or *vice versa*.

Figure 3-47 shows an example where the audio track from video clip 1 has been extended, using the split-audio tools, to overlap the start of video clip 2 by a duration of 10 frames.

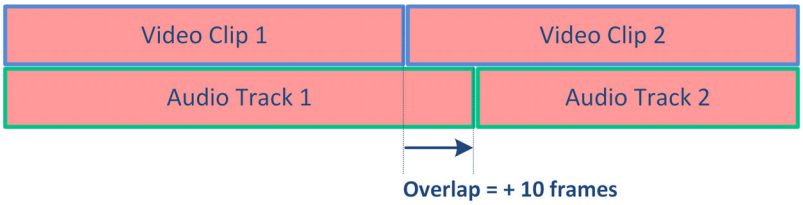


Fig. 3-47: Split-audio Overview

Use the split audio tools on the Panel as follows:

1 Tap to launch split-audio mode.

This reveals a new column, to the left of the pane, representing the audio tracks, together with any configured audio transitions.

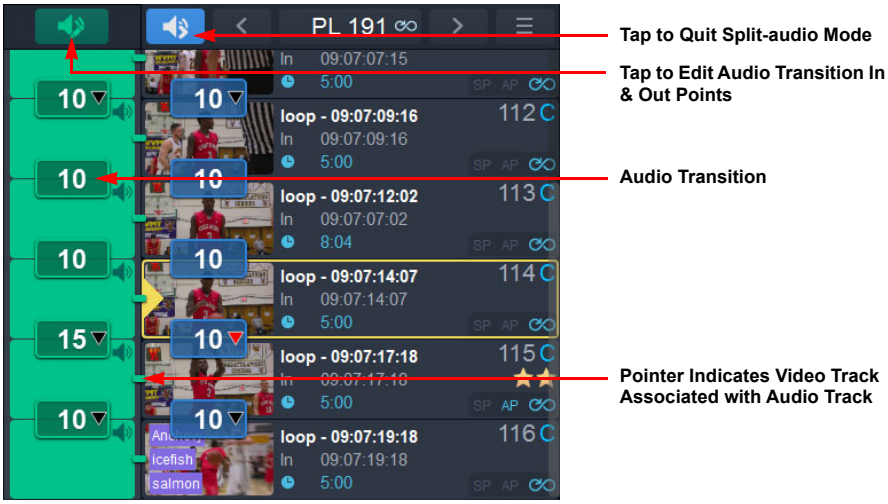


Fig. 3-48: Split-audio Mode

2 Select the target clip for which you want to adjust the audio track.

3 Press to cue the target clip and position the red playhead at the current in point of the clip.

4 Unless already active, press

to initiate edit mode (for the audio clip only) enabling you to reposition the red playhead by turning the jog wheel.

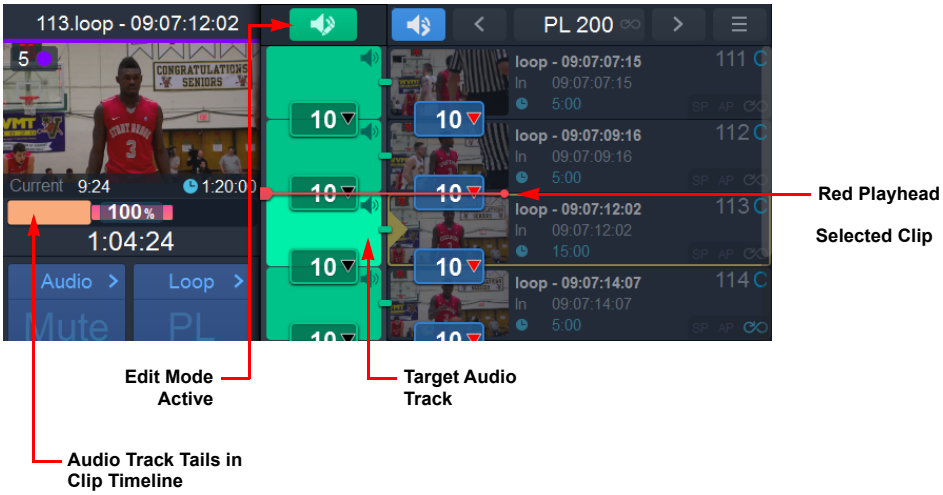


Fig. 3-49: Split-audio Mode Initiated

A representative image of the track and its leading tails is displayed in the clip timeline. A schematic overview showing how LiveTouch builds a clip and its tails for a standard clip duration of 5 seconds at a frame rate of 25 frames/second is shown in Figure 3-50.

When adjusting transitions, always make sure that your target clip includes sufficient tails to complete the operation.

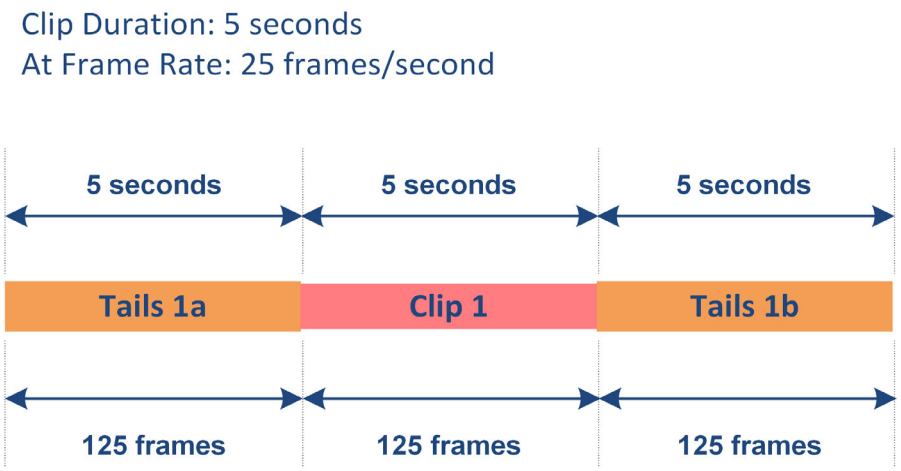


Fig. 3-50: Overview of Clip Structure Showing Leading and Trailing Tails

5 Turn the jog wheel to position the red playhead at the new in point from which you want the audio track to start.

As long as the audio track has sufficient tails, you can extend the audio track so that it starts to play in the time-frame of the preceding track of the playlist. Alternatively you might choose to delay the start of the selected audio track by extending the preceding track into the current track.

> Note: Make sure that your target clip tails include at least 12 frames in addition to the frames included in the transition.

6 Press GoTo In IN to set the new in point for the audio track.
You will see that the vertical height of the audio track adjusts to the new in point.

7 If you also want to set a new out point for the audio track, turn the jog wheel to position the red playhead at the new out point at which you want the audio track to stop.

8 Press GoTo Out OUT to set the new out point for the audio track.
You will see that the vertical height of the audio track adjusts to the new out point.

9 Once you are satisfied with your edit, press to exit from split audio mode.
See Figure 3-51 for a schematic overview of this process.

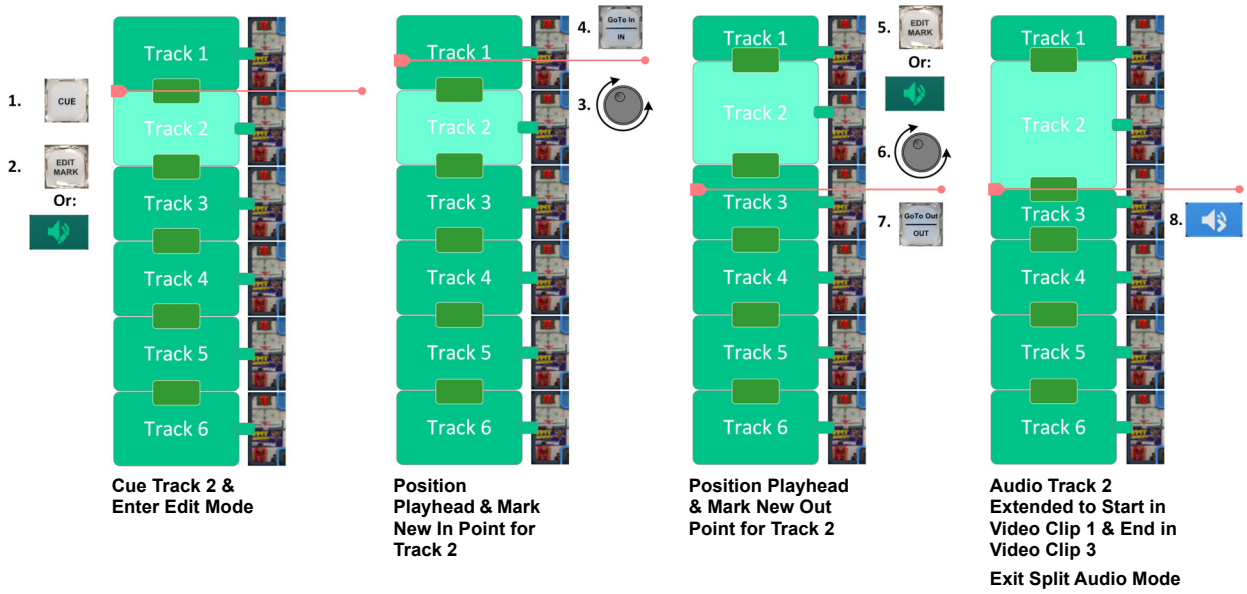


Fig. 3-51: Split-audio Mode - Schematic Overview

More About Playlist Transitions when Using Split-audio Mode

When using split-audio mode, there are a number of constraints that you need to consider when adjusting the in and out points of audio tracks.

Figure 3-52 shows a scenario where the transitions between audio tracks are simple cuts. In this example, you can advance the in point of an audio track to the beginning of the preceding audio track as long as sufficient tails are present.

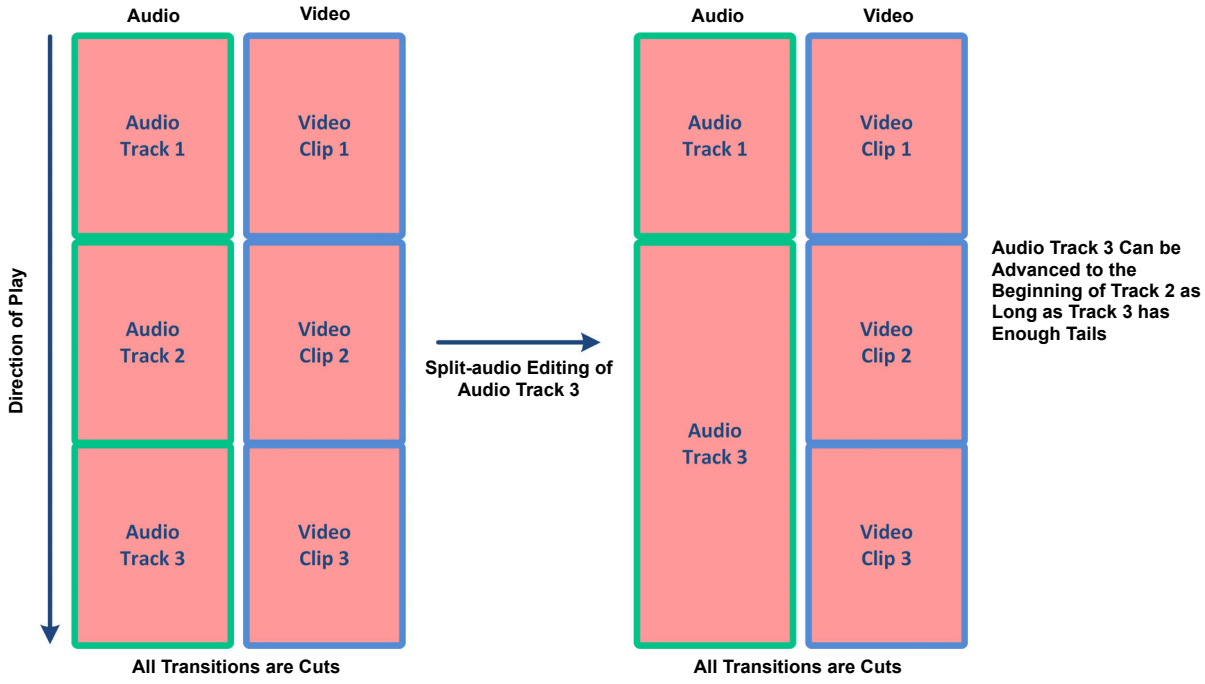


Fig. 3-52: Using Split-audio Mode with Cut Transitions Between Clips

> Note: A cut transition uses 1 -2 frames of each neighboring clip as the transition buffer.

Figure 3-53 shows a scenario using V-fade transitions of equal duration between both audio and video tracks. In this example, you can advance the in point of an audio track only as far as a point at least 12 frames before the transition of the preceding audio track.

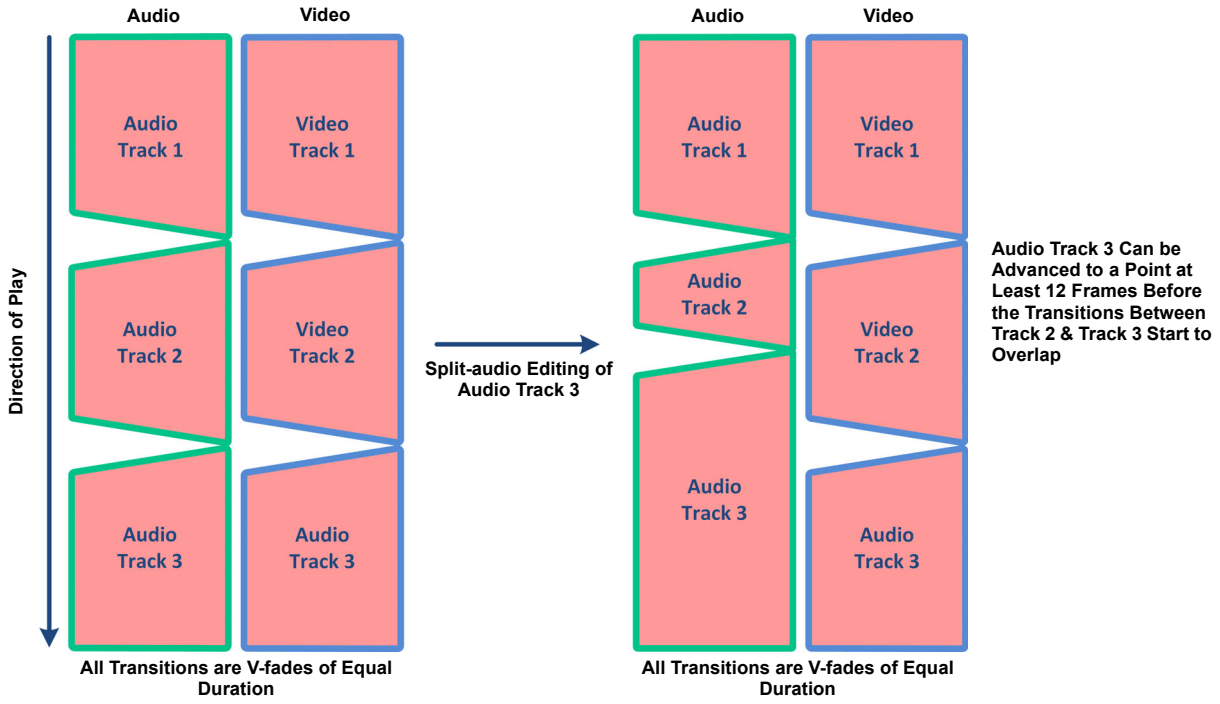


Fig. 3-53: Using Split-audio Mode with V-fade Transitions Between Clips

> Note: In a situation where the audio and video tracks have transitions of different lengths, to prevent transition overlapping in split-audio mode, do not exceed the longest transition of the neighboring audio or video track, whichever is the longest.

Figure 3-54shows similar scenario to the previous example, but featuring cross-fade transitions, rather than V-fades. Again, in this situation, you can advance the in point of an

audio track only as far as a point at least 12 frames before the transition of the preceding audio track.

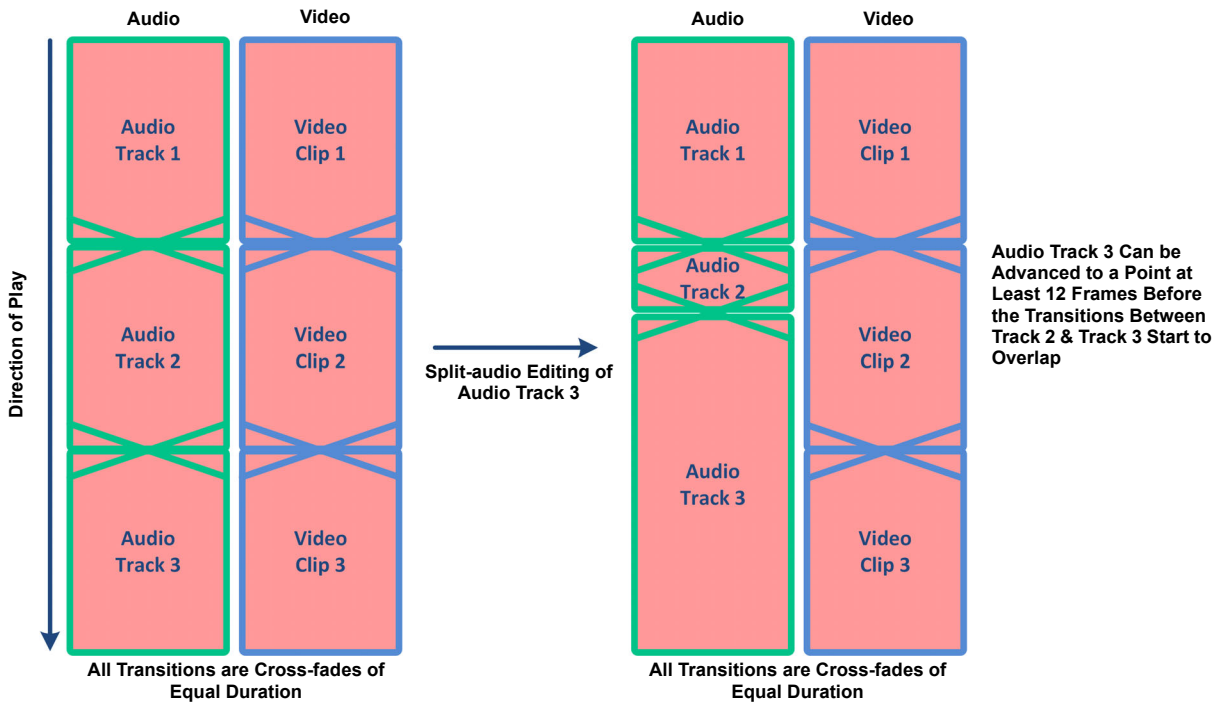


Fig. 3-54: Using Split-audio Mode with Cross-fade Transitions Between Clips

Removing a Transition

To set or remove a transition in the playlist:

- Press the numeric transition box between two clips to toggle the individual transition on or off.

  This will replace either a cross-fade or V-fade transition with a simple cut.

Changing the Default Camera Angle for a Clip in a Playlist

With multi-camera recordings the first live recording sets the default camera angle used. In the library the default angle displays in the clip's details.

To change the default angle to one of the other camera angles:

1 Select the multi-cam clip in the playlist and press the Angle box.

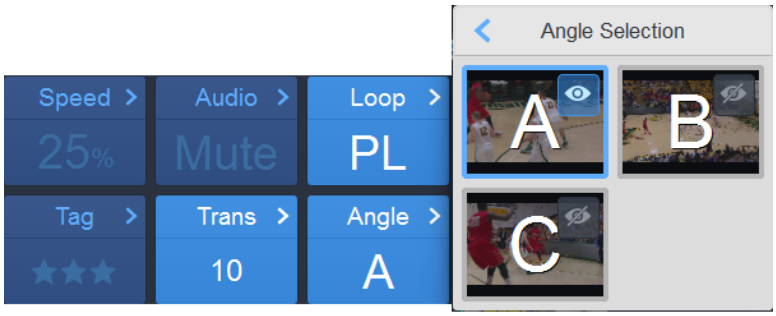


Fig. 3-55: Changing the Default Camera Angle for a Playlist Clip

2 Select the required angle by pressing on one of the camera angle boxes **A - D** (if available).

If necessary, preview the other angles before selecting by pressing the preview icon at the right-hand side of each angle box. If you do not make a selection after previewing, the default camera angle is not changed.

Using Synchronized Play-out

When synchronized play-out is active and the focus is on **Program** (**PGM**), you can control both channels together, and the actions of play, jog, shuttle, T-bar and navigation apply to both Program (PGM) and Preview (PRV) channels simultaneously. Moving the focus to **Preview** (**PRV**) deactivates synchronized play-out.

To synchronize play-out:

- On the panel, press:

+

.

  The mode indication area on the panel displays: ↑↑, and the Desktop displays **Sync Take**, both showing that synchronized play-out is active.

To turn off synchronized play-out:

- Press:

+

again.

Working with the LiveTouch Play-out Modes

LiveTouch provides the following two switchable playout modes:

- Program/Program mode (**PGM/PGM**)
- Program/Preview mode (**PGM/PRV**)

You can switch between default play-out modes by pressing

+

.

Alternatively, you can also switch mode in the **User** tab of the LiveTouch Settings menu, see the section *Panel Settings: User Configuration*, on page 110.

When using the LiveTouch Panel, you can distinguish between the play-out modes by the color of the border around the Port window, together with the Port number displayed in the top left-hand corner of the Port window.

These play-out modes are described in the following sections.

Program/Program (PGM/PGM) Mode on the Panel

In Program/Program mode you can operate ports with a dedicated, independent play-out on each port. In this mode there is no interaction or play-through from one channel to another.

Press

to switch control from PGM 1 to PGM 2.

You can choose to control single program channels independently, or to control multiple program channels together using the **Sync** function.

To use **Sync** operation, press

then

. In this mode the **PLAY** key is green.

Use the following keys on the Panel to control the Port windows:

Panel Key	Description
None	Control each Port window independently.
	Use to cycle between the active port window you are controlling.
	When green, **Sync** mode is active; use controls on both Ports together.

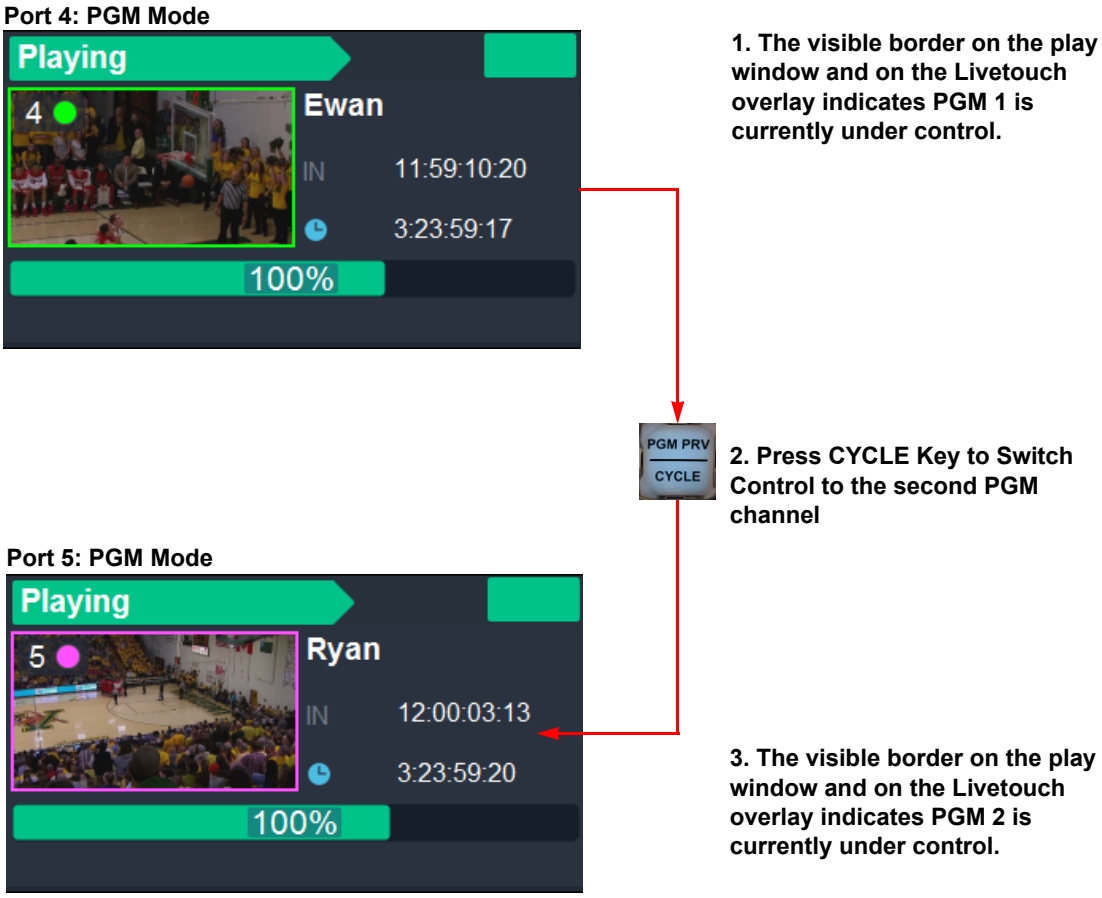


Fig. 3-56: Program / Preview (PGM/PGM) Mode

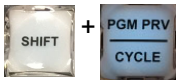
Program/Preview (PGM/PRV) Mode on the Panel

The Program/Preview mode allows interaction between play-out channels. In this mode the program channel is played to air and the preview channel is used to preview and prepare the next clip or recording for output to air.

In **PGM/PRV** mode, the **PLAY** key and the T-bar will always initiate playout on the **PGM** channel.

By default, when in **PGM/PRV** mode, both channels go into **SYNC** operation when the focus is on **PGM**, allowing you to control the PGM and PRV channels together with PLAY, jog and shuttle being applied to camera angles on both channels.

Changing focus to PRV, deactivates synchronized play-out, allowing you to navigate solely on the PRV channel using the jog wheel to prepare material for air.

Panel Key	Description
	Use to control both Ports together.
	Use to enter and exit Program/Preview mode.
Focus on PGM Port **Focus on PRV Port**	Use to switch the active Port window you are controlling. When in PGM/PRV mode and the focus is on PGM, the CYCLE key is lit green; when focus is on PRV, the CYCLE key is lit red. **Note:** When using multi-cam clips and a clip is cued on Program, the next available angle is automatically cued on Preview.
	Use to TAKE the content on the PRV port through to PGM at the current PGM speed, with the currently configured transition. When taking PRV through to PGM the video on the PGM port is swapped to the PRV Port window.

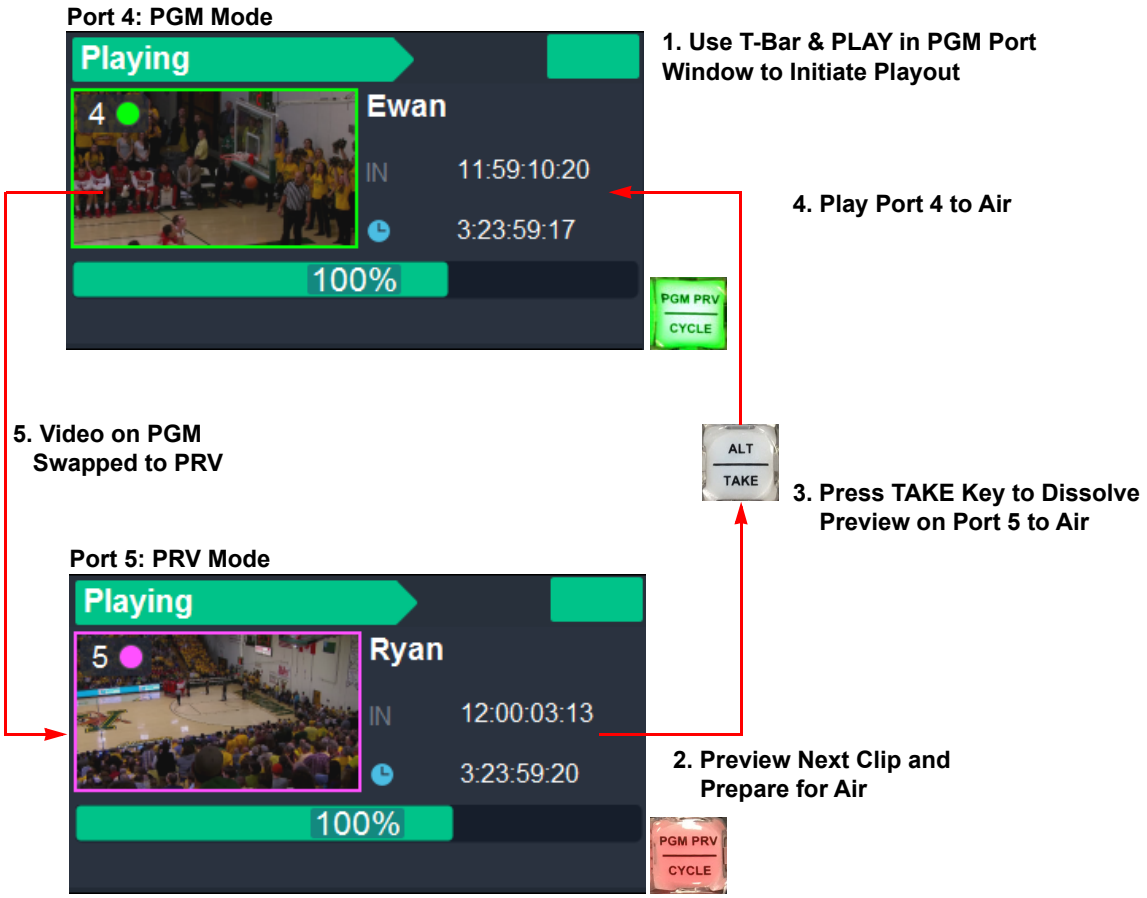


Fig. 3-57: Program / Preview (PGM/PRV) Mode

Using Program/Preview (PGM/PRV) Mode with a Playlist

When cueing a playlist in PGM/PRV mode, the first clip in the dissolve playlist is cued on the PGM port window and the second clip in the list is automatically cued in the PRV port window. This enables you to leave a playlist cued on the PGM Port window while editing on the PRV Port window. Use the jog wheel to scroll through the playlist or press:

or to change the clip cued on PRV and adjust in and out points, if necessary.

Press play at any time to initiate playout of the playlist.

> **Note:** You can still edit a playlist in PRV mode while clips are playing out to air on the PGM port.

Panel Key	Description
or	Use to navigate the playlist and switch the clip in the PRV port window. Alternatively, touch a playlist clip in the touchscreen to select it.
	Use to mix the PRV port clip though to the PGM port window when cueing a clip in the PRV Port window.
or	When in the PRV Port window channel, you can edit clips in the playlist. Use to change the in and out points in a clip. Use the IN and OUT keys to change the in and out points in a clip, if required. To access the tails of a clip press and define new in and out points in the tails of the clip.

Fig. 3-58: Playlist Clips Cued in Program / Preview (PGM/PRV) Mode

Using the Web Bin

Overview

LiveTouch stores material either locally, or on a remote server. The LiveTouch web bin enables you to search, access and share clips and playlists across the entire system. The shared web bin search engine is installed on a virtual machine on the LiveTouch Manager and is used to index and search clips stored on the LiveTouch Manager.

When you open the web bin, LiveTouch generates a web page that can be accessed from either the Desktop or Panel. The web bin allows instant, transparent collaboration between operators.

Using the web bin, you can do the following:

- Perform instant open searches: Use the search bar at the top of the screen to perform dynamic searches on any clip category. The web bin instantly filters results as you enter the search string.
- Search by user: Team replay operators and editors together for instant access and sharing.
- Search by media type: Search single highlights or entire playlist sequences.
- Search by timecode: The web bin enables you to search any game or camera on the system by timecode, or search clip results chronologically.
- Search by library location: Highlights are generally placed in a particular area of the clips library according to type and importance. The web bin allows you to browse any clip library according to page, bank, or slot location.
- Search by star rating or tag: Sort the search results by star ratings or event tags.

Accessing Remote Files Using the Web Bin

The Panel's web bin enables you to search all material available on the system for a specific clip, clips or playlist.

To search for a clip:

- Press the Web Bin softkey: .

  This opens the web bin allowing you to search remote video storage by title, library slot, or user either to copy clips or playlists into the local clips library, or to send clips directly to a local playlist.

The IP address of the LiveTouch web bin host machine used for the search is defined in the **Search IP Address(es)** field of the **Network** tab in the Panel Settings, as described in *Panel Settings: Network Configuration*, on page 132.

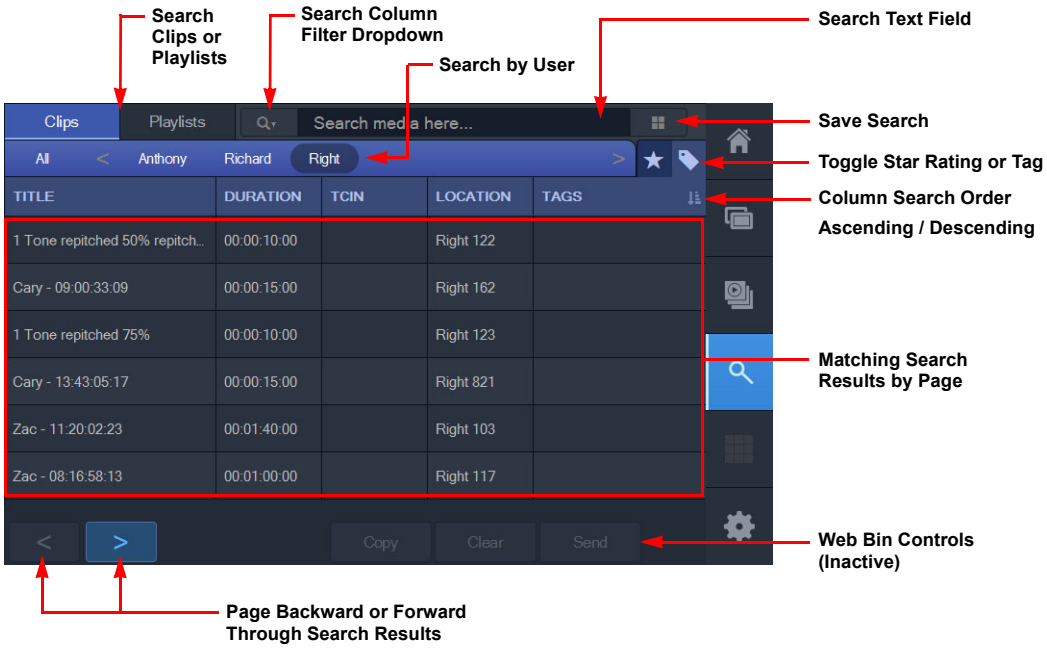


Fig. 3-59: Searching for Clips in the Web Bin

Searching for Clips in the Web Bin

You can use various methods to customize your search in the web bin, for example, either:

- Enter a text string into the **Search** text field using the keyboard or soft keyboard.

  You will see that the display changes dynamically to filter the entries according to the text you enter. The search filters across all categories, not just the title, so you can search for clips using timecode, location, etc.
- Restrict the search to either Clips or Playlists.
- Switch between star rating and clip tag columns:
- Change the column sort order, as required, by pressing the column header then toggling the sort icon: at the right-hand side of the active column header, to switch sort order between ascending or descending.
- Press to open the Search dropdown menu to restrict the search to specific columns:

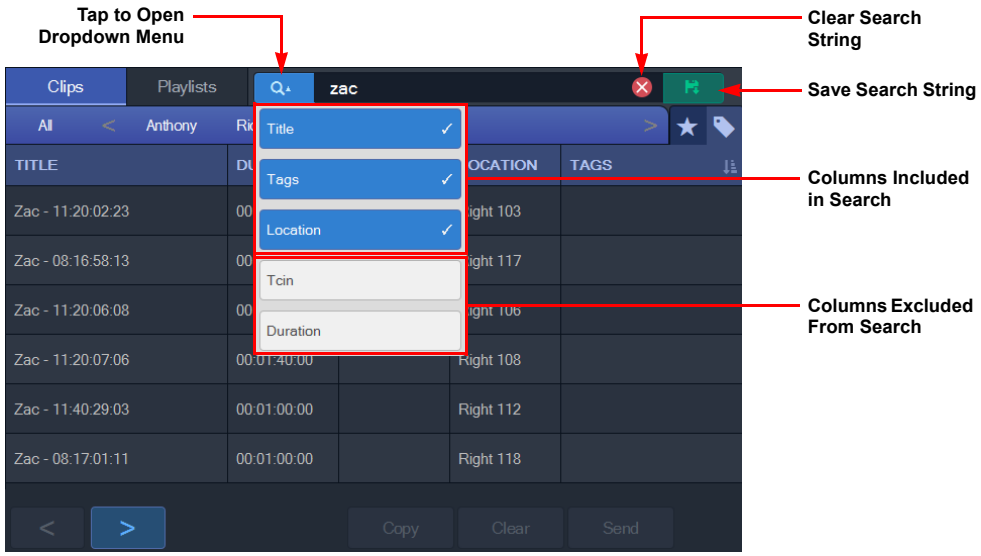


Fig. 3-60: Restricting the Search to Specific Columns

Working with the Search Results

Use the web bin controls at the bottom of the screen to manage the search results.

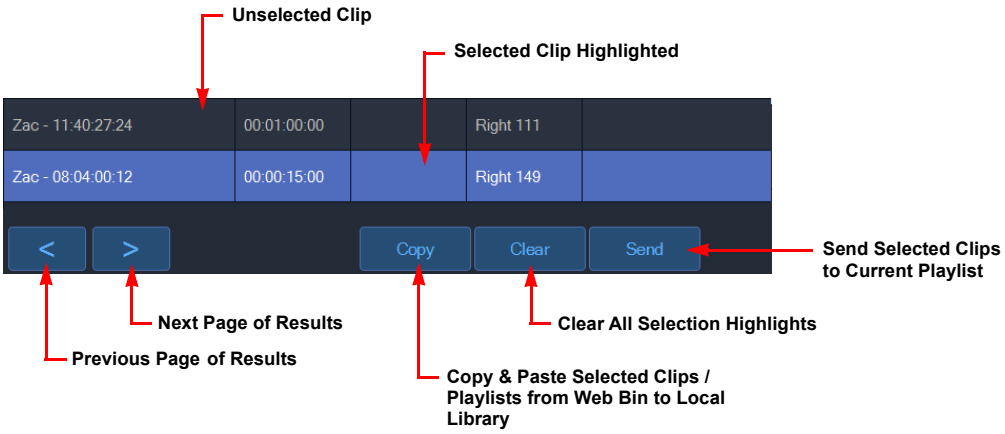


Fig. 3-61: Page Navigation Tools for the Search Results

> Note: The Clear control simply removes any highlights you have used to select clips or playlists in the search results. It is not possible to remove clips or playlists in the web bin.

Saving a Clip or Clips to the Local Clips Library

The LiveTouch web bin gives you access to remote clips, created by other users, and import them into your local clips library.

To save a clip or clip(s) to the local clips library:

1 Search for the clip(s) using the search tools and methods described previously.

2 Select the desired clip(s) on the first page of search results.

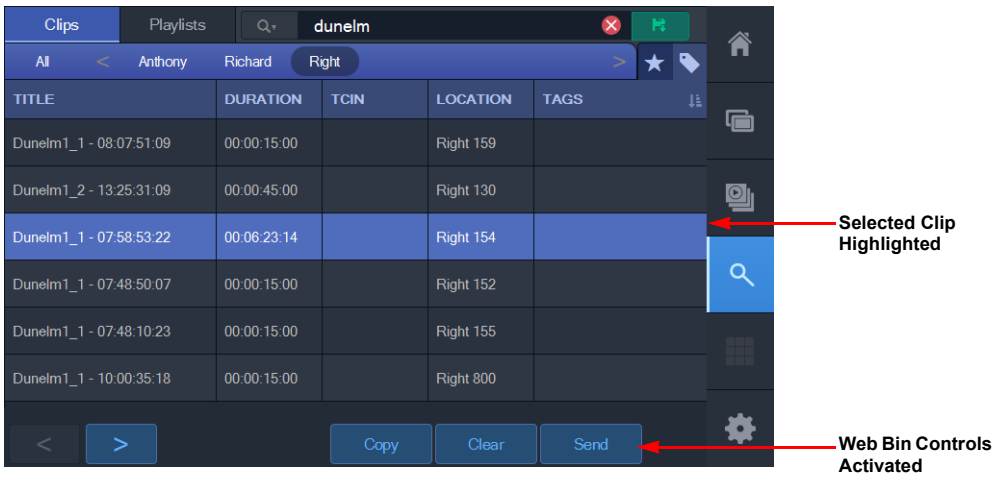


Fig. 3-62: Selecting a Clip in the Clip Search Results

3 Press Copy.

4 Press to switch to your local clips library.

5 Locate the Page, Bank and Slot where you would like to save your copied clip(s).

6 Press Paste.
This pastes your copied clips into the target location.

7 Return to the next page of search results, if available, and repeat steps **2** through **6**.

Importing Playlists from Other Users

You can use the web bin to search for playlists created by other users and copy them to your local Library.

1 Press Playlists to search for all playlists.
A list of available playlists, created by you and other users, is displayed.

2 Select the desired playlist(s) on the desired page of the search results.
This activates the Copy control.

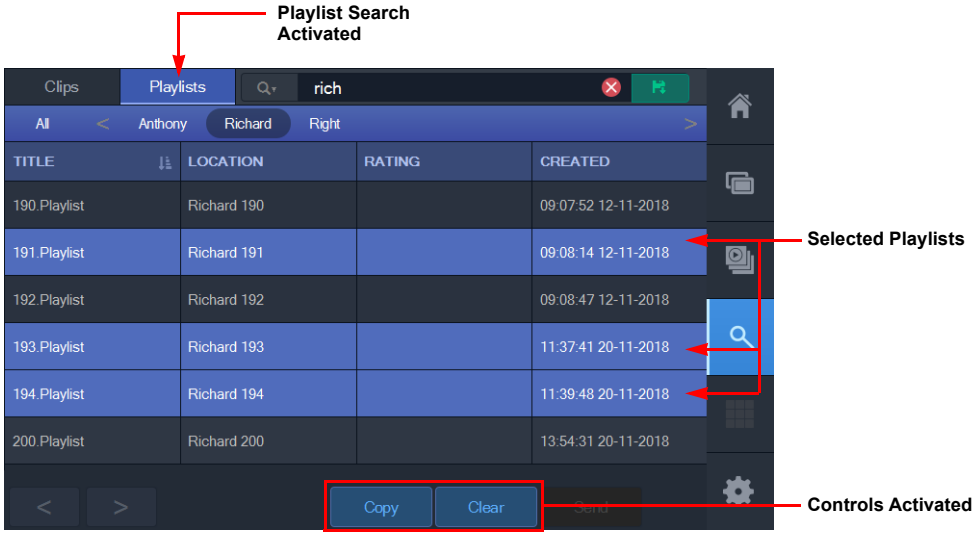


Fig. 3-63: Selecting a Playlist in the Playlist Search Results

3 Press Copy.

4 Press to switch to your local clips library.

5 Locate the Page, Bank and Slot where you would like to save your copied playlist(s).

6 Press Paste.
This pastes your copied playlist(s) into the target location.

7 Return to the next page of search results, if available, and repeat steps **2** through **6**.

Saving a Web Bin Search String

To enable you to retrieve frequently used search strings quickly, you can save your favorite web bin searches as follows:

1 Enter a search string into the Search field.
The Save Search softkey is activated as soon as you start to type.

2 Press to save your search string.

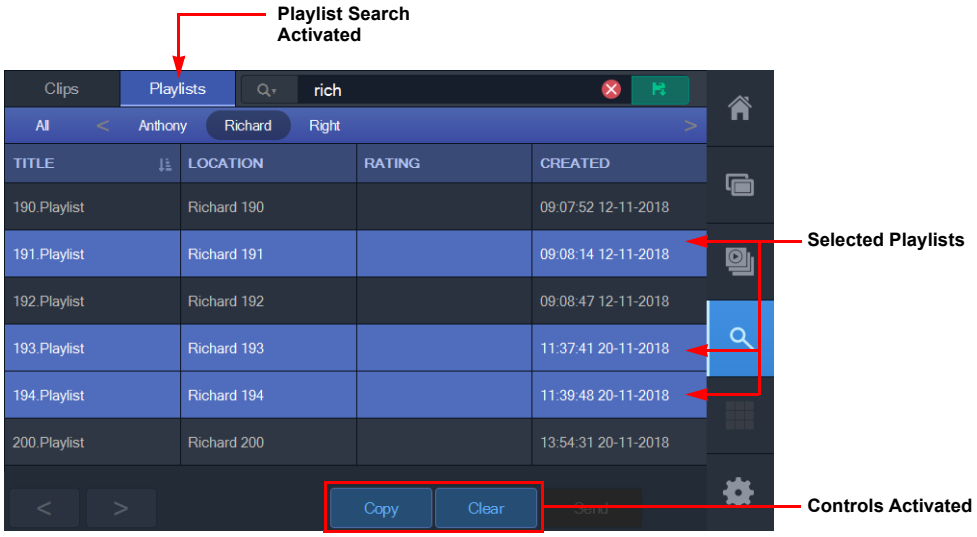


Fig. 3-64: Selecting a Playlist in the Playlist Search Results

Retrieving a Search String from the Web Bin

Re-use a saved search string from the web bin database as follows:

1 Tap to go to your saved web bin searches.

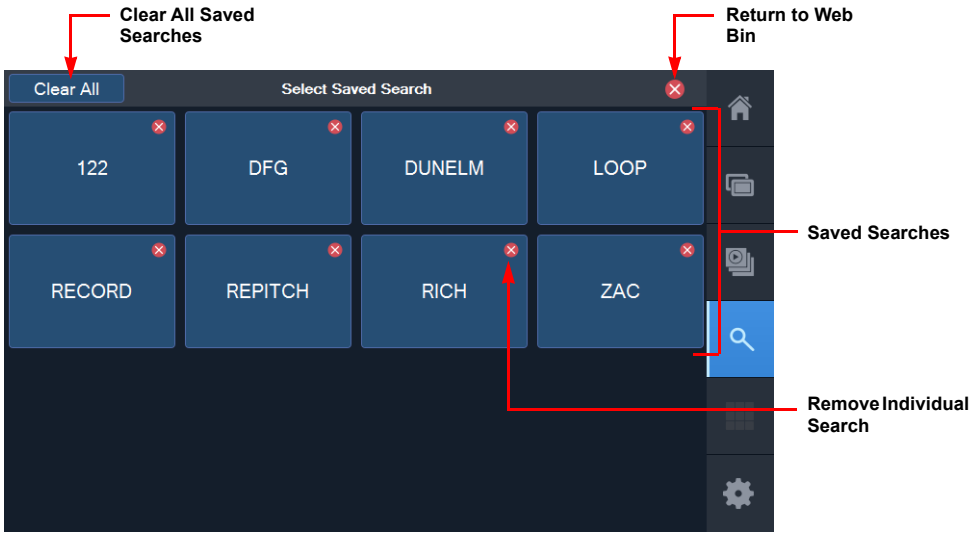


Fig. 3-65: Selecting a Saved Search in the Web Bin

2 Tap the search you want to use.

You are immediately returned to the web bin search and the results of the selected search string are displayed.

3 To return to the web bin without selecting a search, tap: .

Removing Web Bin Search Strings

You can remove saved search strings using one of the following methods:

- To remove a single search, tap: in the top right-hand corner of the individual search.

- To remove all saved searches, tap: Clear All.
  This displays the confirmation dialog; tap Yes to confirm removal of all saved searches.

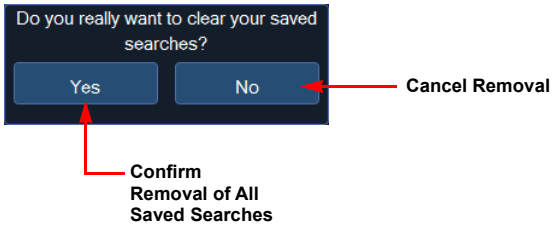


Fig. 3-66: Confirming Removal of Search Strings

Sending Clips to a Playlist

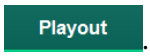
To send clips retrieved in a search directly to a playlist:

1 Search for the clip(s) using the search tools and methods described previously.
2 Select the desired clip(s) on the first page of search results.
3 Press Send.
  This sends the selected clips to the currently active playlist.
4 Go to the next page of results if required, and repeat previous steps **1** and **2**.

Switching Playout Ports in the Playout Tab

If you ever need to give-up ports for use by another operator, or simply switch to different playout ports, you can do so as follows:

1 Press to display the Home screen

2 Select the **Playout** tab  .

Any in-use ports are displayed in the right-hand Playout Ports pane.

You will see the available LiveTouch servers (e.g., NS2, NS3 below), displayed in the left-hand Playout Ports pane.

Tap to expand the server listing and display any ports that are unused and available for selection.

3 Tap the ports you want to close in the Playout Ports pane.

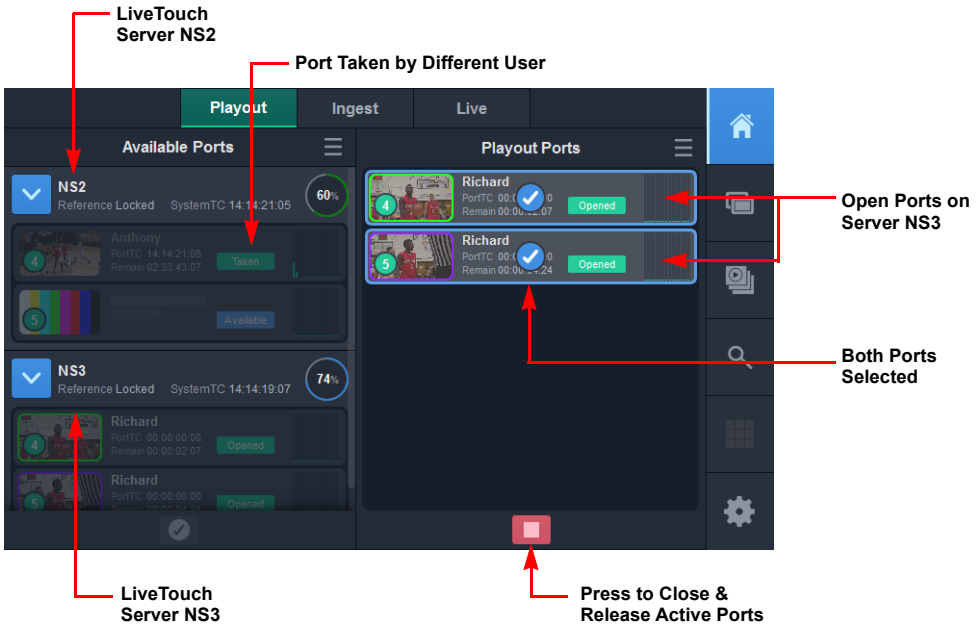
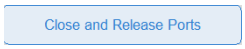


Fig. 3-67: Currently Active Ports in the Playout Tab

4 Tap to close the currently active playout ports.

You are prompted to confirm the closure of the active ports.

5 Press  to confirm the port closure.

This closes the active ports.

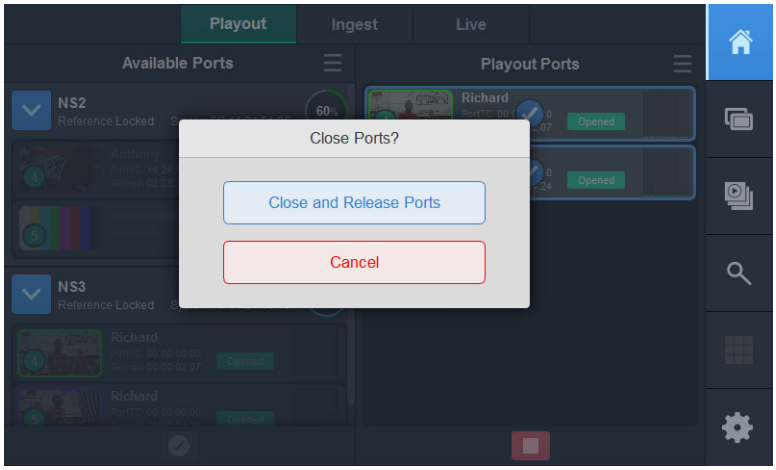


Fig. 3-68: Confirming Port Closure

6 Select the ports you would now like to use for playout.

This opens the Open Ports for Playout popup.

7 If necessary, change the user name assigned to the ports, enter the new user name using the soft keypad then press Confirm.

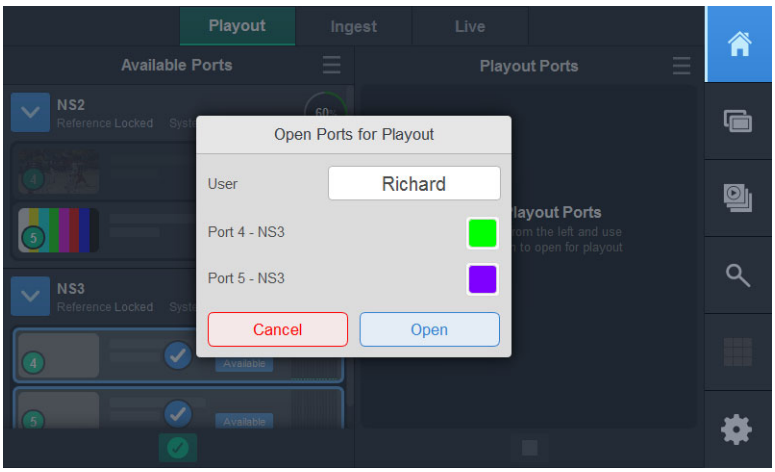


Fig. 3-69: Updating the Name Assigned to Playout Ports

You can also select a different highlight color for the playout ports.

To do so, tap the current color and select a new overlay color from the popup.

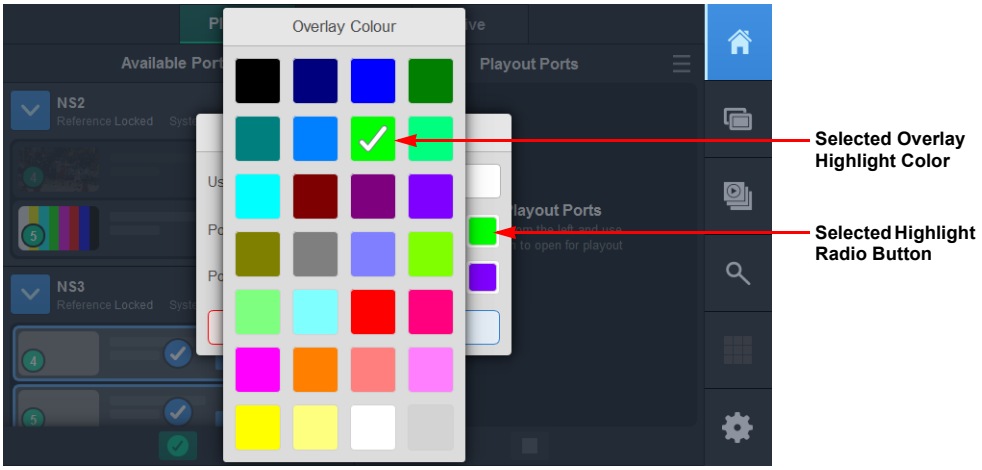


Fig. 3-70: Selecting a Different Overlay Highlight Color for the Playout Ports

8 Press Open to complete the set-up and use the new selected ports.

Entering Data in the LiveTouch Fields

LiveTouch provides a soft alphanumeric keypad and a soft numeric keypad, which you can use to enter the required data into the LiveTouch input fields.

Entering Alphanumeric Text

Blank fields that require text entry such as a name or category, when pressed, display a soft keyboard allowing you to enter text. (You can also enter text using a connected external keyboard.)

The following diagram shows the soft keyboard functions.

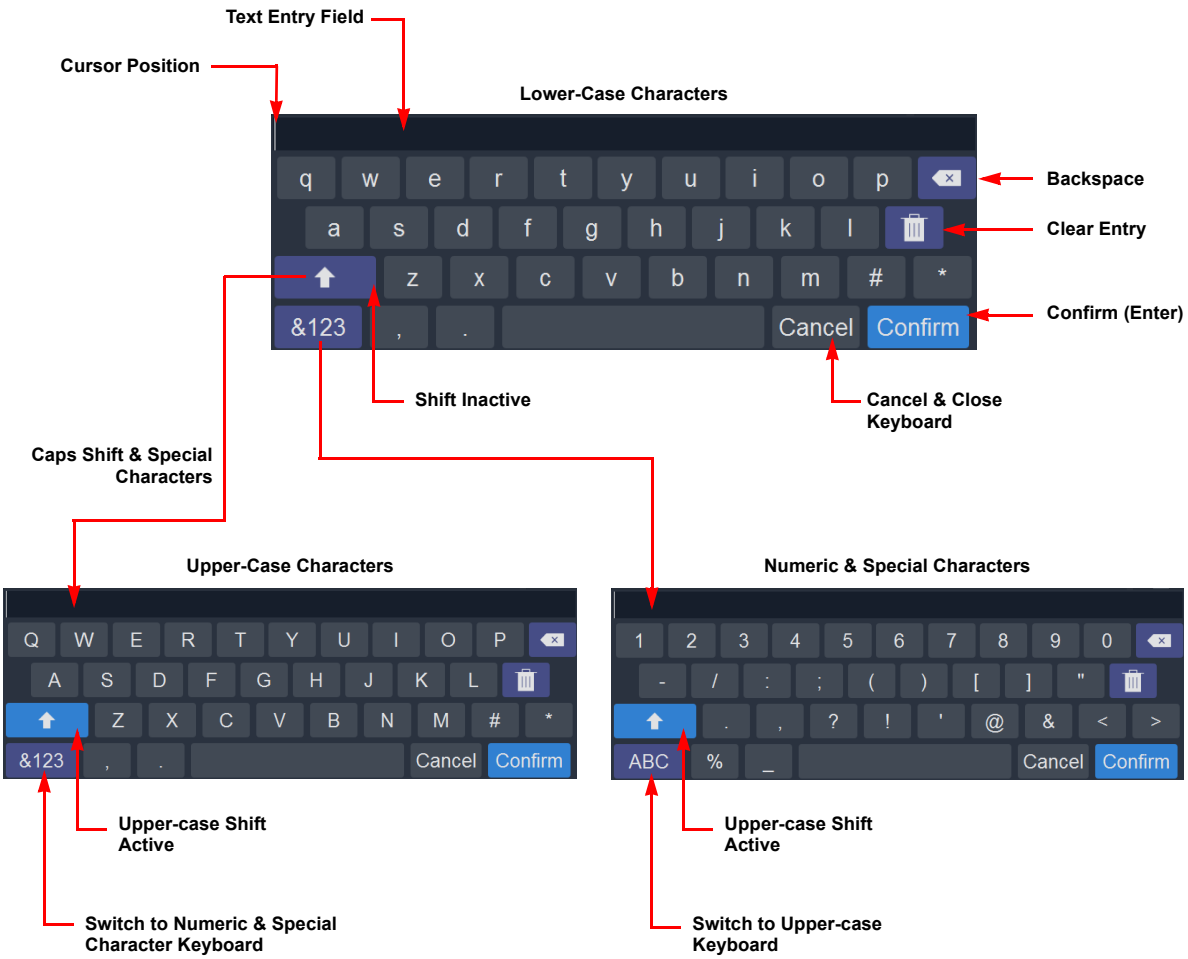


Fig. 3-71: Soft Keyboards on LiveTouch Panel

Entering Numeric Values

Numeric fields, when pressed, display a soft numeric keypad that enables you to enter a numeric value. You can also enter numbers using a connected external keyboard.

The soft keypad provides additional functions over a standard keypad, and is used as follows:

- Enter a value using the keys on the popup.

  The new value displays in the popup. Tap on this box to transfer the value, then tap on it again to close the popup (or press **Return** on the external keyboard).

  If required, press **Cancel** to cancel your input, or **Confirm** to accept your input.

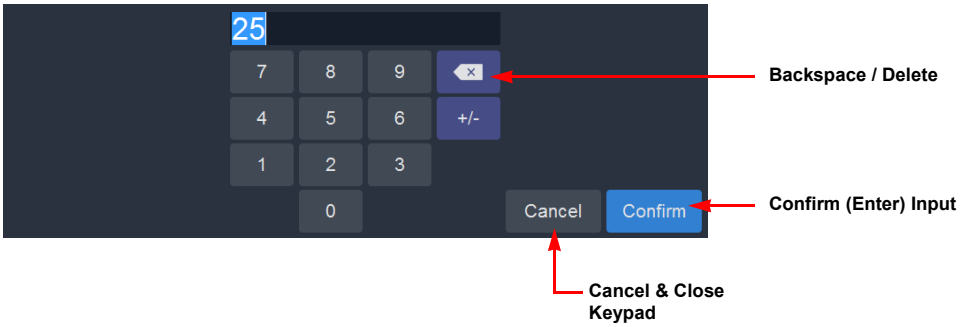


Fig. 3-72: Soft Numeric Keypad on LiveTouch Panel

4 Configuring the LiveTouch Panel Settings

Overview

The LiveTouch Settings menu on the Panel enables you to configure the default operational parameters for the system from a single interface on the LiveTouch Panel.

Press the Settings softkey to open the menu, with each section of the settings available in one of the following tabs along the top of the screen:

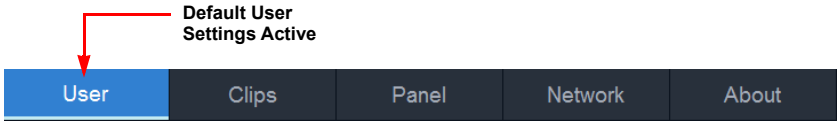


Fig. 4-1: LiveTouch Panel Settings Tabs

The last active tab is displayed first by default from:

- **User** Settings
- **Clips** Settings
- **Panel** Settings
- **Network** Settings
- **About** General Information and Power Controls

Switch between the different Settings menus by pressing the appropriate tab.

Panel Settings: User Configuration

The **User** configuration tab enables you to define the following:

- PGM/PRV Mode settings
- Audio settings
- General user settings

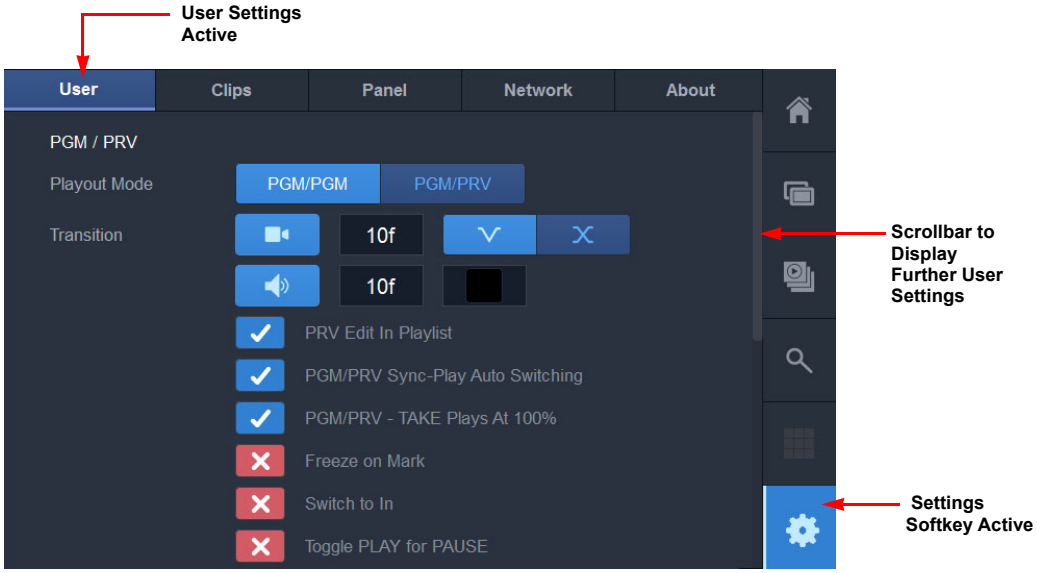


Fig. 4-2: User Settings Menu

PGM/PRV Mode Settings

Playout Mode Settings

> Note: Only available when more than one playout port is open

Allows you to set the default playout mode for LiveTouch.

Option	Description
PGM/PGM	Set default playout mode to Program / Program.
PGM/PRV	Set default playout mode to Program / Preview.

You can use the PGM/PGM and PGM/PRV softkeys to toggle between modes on the panel or alternatively, use the Panel keys:

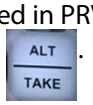
+

.

Transition Settings

This section defines the default transition settings when you switch playout from PGM to PGM or PRV to PGM, depending on your selected mode.

Option	Description
	Default setting when switching from the PRV port window to PGM playout. Set whether the default transition applies to video track(s). Default: On
	Set the default mix length in frames (f) used when switching from the PRV port window to PGM playout. Default: 10 frames
	Clip transition V-fade - can be applied to audio track, video track or both audio and video. Select a V-fade as the default transition. Activates the swatch popup to set the V-fade flash color for the transition.
	Clip transition cross-fade - can be applied to audio, video or both. Select a cross-fade as the default transition.
	Default setting when switching from the PRV port window to PGM playout. Set whether the default transition applies to audio track(s). Default: On
	Set the default mix length in frames (f) used when switching from the PRV port window to PGM playout. Default: 10 frames
	Set the V-fade flash color for the clip transition.

Option	Description
PRV Edit in Playlist	When selected, this setting is applied in the following cases: • If you switch from PGM/PGM mode to PGM/PRV mode, LiveTouch automatically takes you to the PRV port window when you have at least one active playlist. • In PGM/PRV mode when switching from the clips library to a playlist. • Cues the selected playlist entry on the PRV port window when the clip is selected by mouse click or movement of the clip highlight. (Note: This happens regardless of the setting of this option when a clip is automatically selected as the clip highlight progresses through the playlist during playout in PGM/PRV mode. Default: Selected
PGM/PRV Sync - Play Auto Switching	When selected, activates and deactivates the Sync Play mode when cycling between the PRV port window and the PGM port window. Depending on the setting of this option, with sync **On**, you can control both channels together so that, play, jog, shuttle, T-bar and navigation apply to both PGM and PRV port windows simultaneously, when the focus is on the PGM port window. When you change focus back to PRV, Sync is deactivated. Default: Selected
PGM/PRV - TAKE Plays At 100%	When selected, always plays content loaded in PRV at 100% when mixing through to PGM by pressing  . **Important:** If unselected, the content mixed through to the PGM Play-out port plays-out at the same speed as the previous clip. If the PGM play-out port is paused before pressing the content is mixed through to PGM and remains paused. Default: Selected
Freeze on Mark	When selected, activates a stop at a mark when you set a new mark, or jump to a new mark, on the live recording (the out point is displayed on the overlay.) Press to restart play from a stop at a mark point. If freeze on mark is selected and the overlay is on, the out point on the overlay will update to the next out mark as the playout position changes. This means that you need not step to a mark in order to make it the next freeze point. Default: Unselected

Option	Description
Switch to In	When selected, loads angles in PRV channel at the timecode of the last marked in point in the PGM port window. Default: Unselected
Toggle PLAY for PAUSE	When selected, the function of the PLAY key will toggle between PLAY and PAUSE. The PLAY key on the panel is lit red when this option is active. Default: Unselected

Camera Switch Settings

Allows you to set the default playout mode for LiveTouch.

Option	Description
Live	Loads new live feed at Live record head, when not using multicam groups. Default: Off
Match Timecode	Loads new live feeds at the current timecode (TC), when not using multicam groups. Default: On

Audio Settings

Audio Mute Speed

This is setting is intended to prevent output of a distorted audio track as the play speed of a clip is reduced or increased when using variable speed playback. You can define minimum and maximum thresholds above and below which LiveTouch mutes any audio tracks.

Option	Description
0 Min	Sets the lower speed limit, below which any audio tracks are muted. Enter the new setting on the numeric keypad, then press Confirm. When active, you will see displayed in the mode indication area of the panel touchscreen. Default: 0%
200 Max	Sets the upper speed limit, above which any audio tracks are muted. Enter the new setting on the numeric keypad, then press Confirm. When active, you will see displayed in the mode indication area of the panel touchscreen. Default: 200%

Creating Audio Presets

The audio patching function enables you to create a list of preset audio input-to-output channel mappings that you can apply quickly, as and when required.

Once you have defined a list of audio presets in this menu, you can select an appropriate preset quickly, from a list, when applying audio patching to any clip in the port windows.

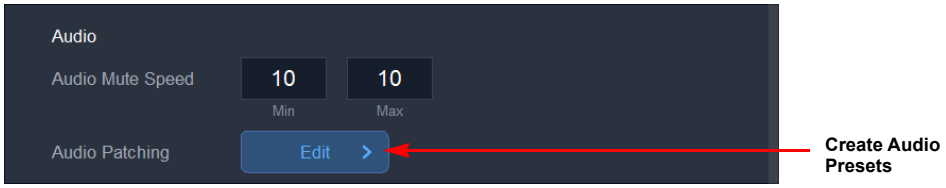


Fig. 4-3: Opening the Audio Presets Configuration Panel

Define audio presets on the Panel as follows:

1 Open the **User** tab, scroll up to the **Audio** section and press the Audio Patching box.

This displays the **Manage Audio Presets** panel.

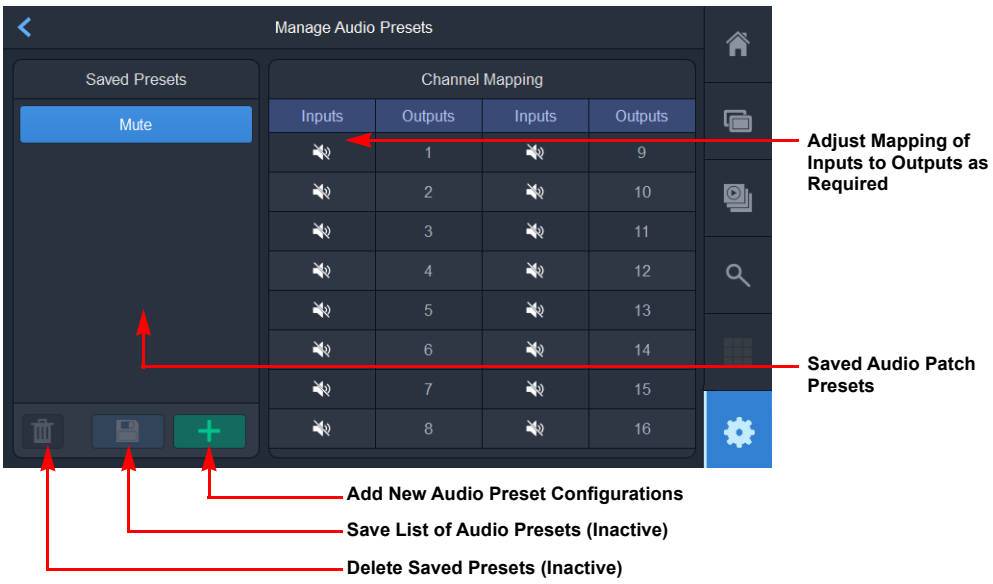


Fig. 4-4: Creating a New Audio Preset

When first accessed, the **Manage Audio Presets** panel enables you to set-up and add audio presets to the list of **Saved Presets** by mapping Inputs to Outputs in the Channel Mapping section of the panel.

2 To create a new audio preset, press the + box.

This opens the soft keypad for you to enter a name for the new audio preset list. The new preset is added to the list and a matrix of available audio inputs and outputs is activated.

3 Define the input and output patching between the audio channels by selecting the required input for the corresponding output.

Mute is a default setting which will mute all channels when selected.

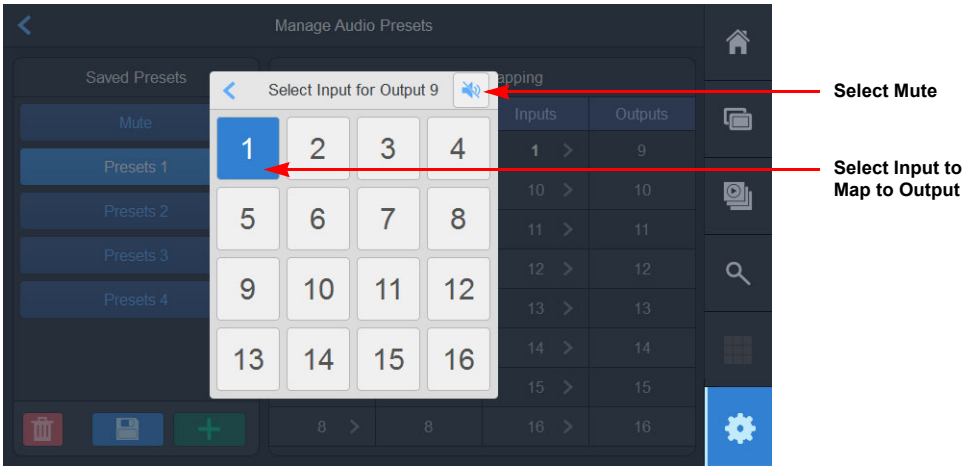


Fig. 4-5: Changing Available Audio Presets

4 Press then **Confirm** to save the settings as a new preset.

5 Repeat the previous steps as necessary to create as many audio patch presets as required.

New presets are added to the list of Saved Presets and are available for selection in the Clips Library or Playlist panels when editing the audio patching preset defaults:

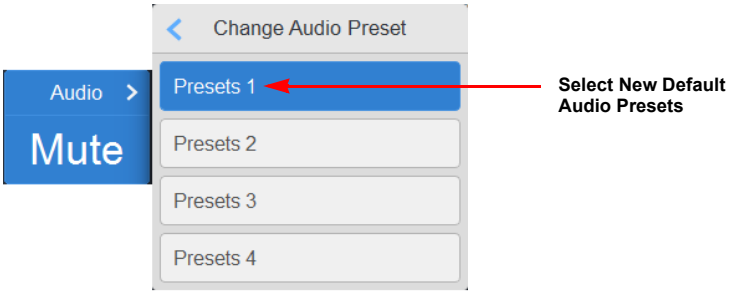


Fig. 4-6: Changing Audio Preset Defaults for the Clips Library or Playlists

For more information, see the section *Assigning Audio Patching Options*, on page 61.

If necessary, press to remove any presets from the saved list. When a preset is in use, LiveTouch disables the delete function and grays-out the icon: .

General User Settings

In the **General** user settings, you can set the following:

- Time intervals (in seconds (***s***) or frames (***f***)) used to step backward or forward through a clip.
- The ability to prevent the cursor moving to a specific Page, Bank, or Slot in the clips library as you enter a number on the number keypad.

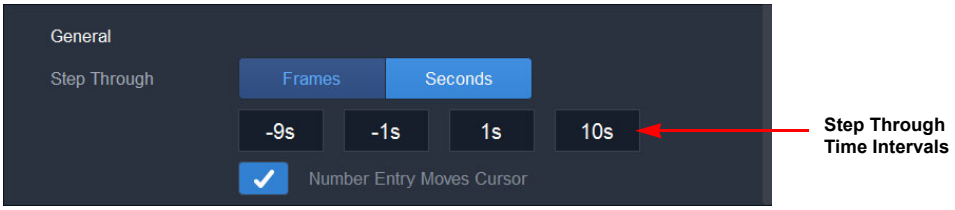


Fig. 4-7: General User Settings

Setting the Step-through Intervals

Add info on Step-through Frames/ Seconds setting

The step-through time intervals, once configured are displayed in the timeline step-through softkeys, accessed from the Panel Action Bar, see Figure 4-8.

You can use the Step Through softkeys Frames Seconds to toggle the units for the step-through values between frames or seconds.

If you change the step-through units, LiveTouch reflects this change in the LiveTouch section of the Desktop Client <**F1**> configuration page.

To change the step-through intervals, tap the step-through box containing the target interval, enter the new value using the numeric keypad, then press Confirm.

The new interval is immediately displayed in the timeline step-through softkeys in the selected units (frames or seconds (secs)).

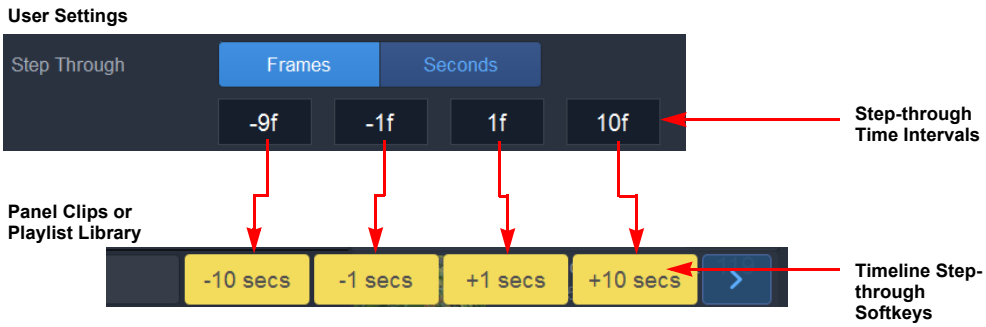


Fig. 4-8: Setting the Step-through Time Intervals

Setting the Automated Cursor Movement on Number Entry

This feature is active by default.

If you deactivate this feature, when you enter a library location on the numeric keypad, the cursor highlight will not move to the target location when you press **Enter**.To deactivate automated cursor movement on number entry, press: ✓ so that it switches to: ✗.

When activate, this feature automatically moves the cursor to a location in the library as you enter each number. For example, Figure 4-9 is the accumulated effect of the following actions:

- Enter 1 on the numeric keypad - the cursor moves to **Page 1**
- Enter 1 on the numeric keypad - the cursor moves to **Page 1, Bank 11**
- Enter 8 on the numeric keypad - the cursor moves to **Page 1, Bank 11, Slot 11**
- Press **Enter** to complete the move.

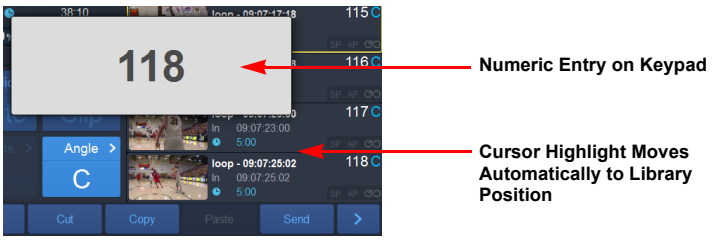


Fig. 4-9: Cursor Movement on Number Entry Using Panel

Figure 4-10 shows the same actions on the LiveTouch Desktop with the Automated Cursor Movement on Number Entry feature active.

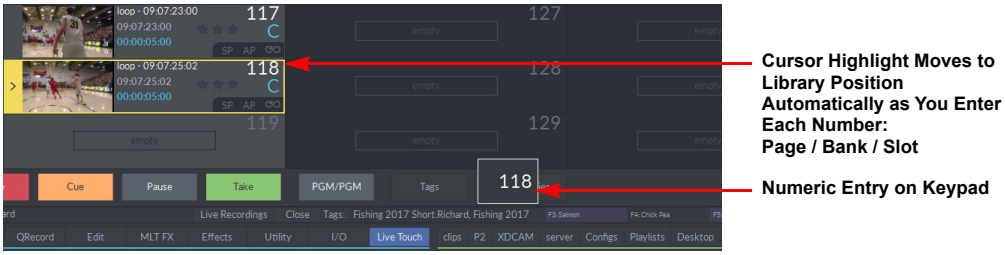


Fig. 4-10: Cursor Movement on Number Entry Using Desktop

Panel Settings: Clips Configuration

The **Clips** configuration tab enables you to define the following:

- Saving settings
- Tails Length setting
- Location setting
- Playlist setting
- Server Publish settings

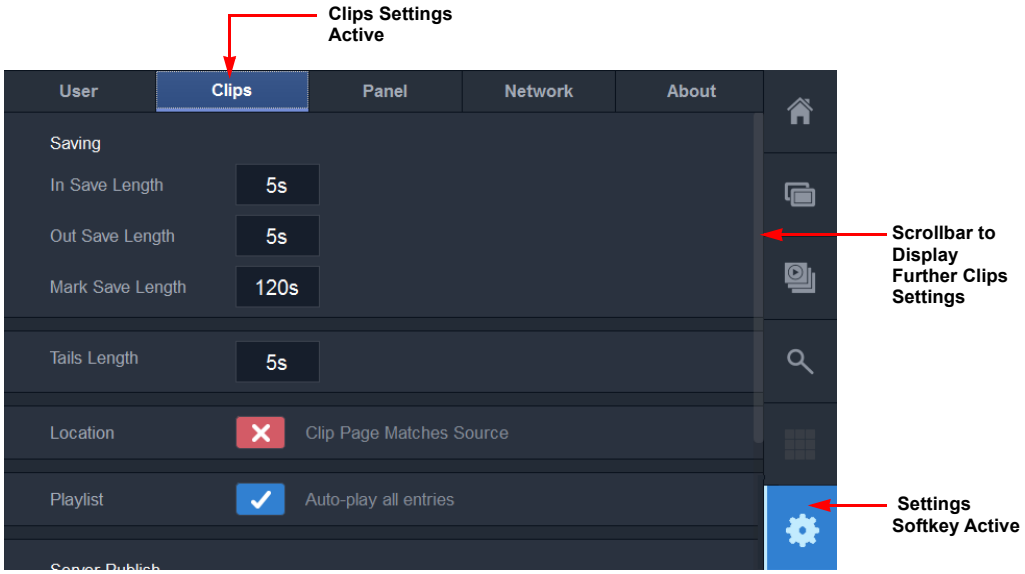


Fig. 4-11: Clips Settings Menu

Saving Clip Settings

Saving Settings

Allows you to set the default parameters for saving clips in LiveTouch.

Option	Description
In Save Length	Set the default clip length (in seconds) when LiveTouch auto-saves a clip after pressing: GoTo In / IN + SAVE. Default: 5 seconds
Out Save Length	Set the default clip length (in seconds) when LiveTouch auto-saves a clip after pressing: GoTo Out / OUT + SAVE. Default: 5 seconds

Option	Description
Mark Save Length	Set the default clip length (in seconds) when LiveTouch auto-saves a clip after pressing: + . Default: 120 seconds
Tails Length	Set the length (in seconds) of the tails saved with each clip. Default: 120 seconds
Location Clip Page Matches Source	When selected, matches the page where clips are saved to the originating camera number. Default: Unselected
Playlist Auto-play all entries	When unselected, playlist playout will pause after each clip in the playlist. When selected, all clips in the playlist play out without intervention. Default: Selected

Server Publish Settings

The Server Publish section of the Clips menu enables you to provide default metadata entries that are automatically applied to any clips published to the video server from LiveTouch.

Fig. 4-12: Server Publish Settings

Panel Settings: Panel Configuration

The **Panel** configuration tab enables you to define the following:

- Jog Wheel settings
- T-Bar settings
- Keys settings
- Screen settings
- General settings

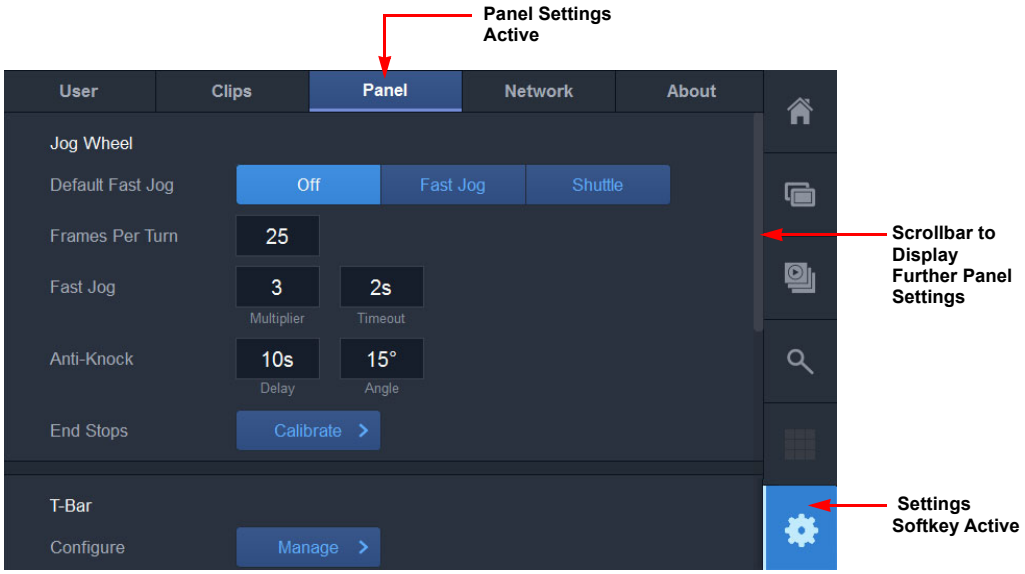
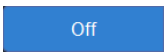
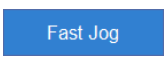
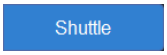
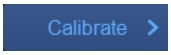


Fig. 4-13: Panel Settings Menu

Jog Wheel Settings

Use this section to define the default behavior of the Jog Wheel on the panel. You can set the default speed of the fast jog mode, the number of frames covered for each full turn of the wheel, the default response in the event of an accidental knock, etc.

Option	Description
Default Fast Jog 	Set to deactivate the fast jog mode. When selected, the wheel is set to the standard jog speed. Default: Selected
Default Fast Jog 	Set to activate the fast jog mode, allowing movement of the jog wheel at the fast jog speed, defined as the standard jog speed multiplied by the value in the Multiplier field. Default: Unselected

Option	Description
Default Fast Jog 	Set the shuttle mode as default, engaging the clutch to allow movement of the jog wheel to shuttle forward or backward through a clip at up to 64x real-time speed. Default: Unselected
Frames Per Turn	Defines how many frames through which the play head moves in one full rotation of the jog wheel.
Fast jog Multiplier	Defines the multiplier for the speed of the jog wheel when used in fast jog mode. Fast jog speed = Frames per Jog Wheel turn × Fast Jog Multiplier. For example: Frames per turn = 25, Multiplier = 3, then one turn = 75 frames. Default = 3 (multiplier)
Fast Jog Timeout	Defines the timeout in seconds after which the fast jog speed returns to the default fast jog mode when the jog wheel is no longer active. Default = 2 seconds
Anti-Knock Delay	The delay (in seconds) before the jog wheel locks back into anti-knock mode after a period of inactivity, to prevent accidental movement.
Anti-Knock Angle	The angle of rotation through which you need to turn the jog wheel to unlock anti-knock mode and start using the jog wheel, to prevent accidental movement.
Clutch Timeout	The duration (in seconds) that the jog wheel clutch remains on and shuttle mode engaged. After this time the clutch is deactivated, to avoid unnecessary use of the clutch, and shuttle mode ended.
End Stops	Press  to calibrate the jog wheel left and right end-stops for the shuttle mode, as described in *Calibrating the Jog Wheel Shuttle End-stops*, on page 122.

Calibrating the Jog Wheel Shuttle End-stops

On occasion you may need to re-calibrate the end stops of the jog when used in shuttle mode, to set the full extremities of its range with the clutch engaged.

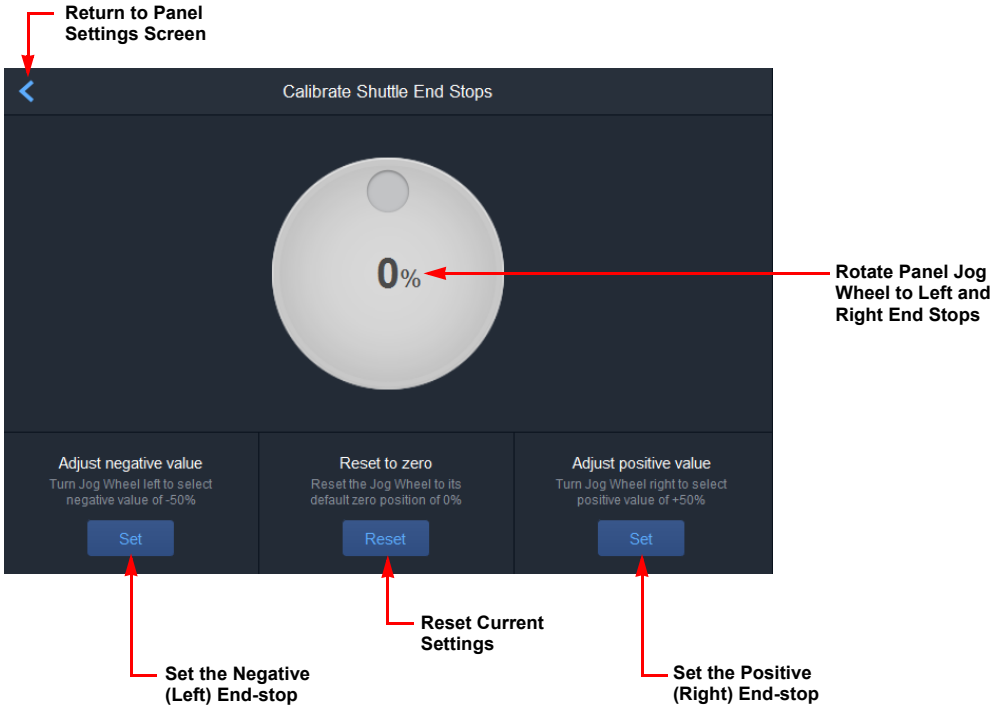


Fig. 4-14: Calibrating the Jog Wheel Shuttle End-stops

Calibrate the shuttle end-stops for the Jog Wheel as follows:

1 With the jog wheel at rest, ensure that the display reads **0%**.
If not, press: Reset.

2 Move the jog wheel anti-clockwise, against the spring, until you reach the end-stop.

3 Back off slightly from the end position and while holding the jog wheel in position, press: Set.

4 Move the jog wheel clockwise, against the spring, until you reach the end-stop.

5 Back off slightly from this end position and while holding the jog wheel in position, press: Set.

> Note: Do not force the jog wheel past the end stops. If this happens restart the configuration from step 1.

6 Press to save your changes and return to the Panel Settings menu.
Check the jog wheel configuration by noting that the display changes from **-50%** to **+50%** from one end stop to the other. If not, you must restart the configuration. In addition, confirm that the at rest position still reads **0%**. If not, you can reset this after adjusting the end points, by pressing Reset after releasing the jog wheel.

Note: Do not exit the Panel Settings without pressing as your changes may not be saved.

T-Bar Settings

This area enables you to set both standard and alternate mode configurations of the T-bar. The standard T-bar mode sets the standard speed range between 0 and 100%, with configurable landing zones at top and bottom. The alternate T-bar mode gives you the ability to set any range between -400% (clip reverse) to +400%, with a configurable dead band between forward and reverse ranges.

Fig. 4-15: T-Bar Configuration

Configuring the Standard T-bar Range

Option	Description
T-Bar Configure	Press Manage to configure the Standard T-Bar and Alternative T-Bar settings as described in the sections: • *Configuring the Standard T-bar Range*, on page 124 • *Configuring the Alternate T-bar Range*, on page 125.

Use this T-Bar configuration screen to configure the standard T-bar range, with built-in *landing zones* at the top and bottom of the range. This allows you to set-up the T-bar so that play does not start from the lowest position, for example, you can prevent play starting if the T-bar is accidentally nudged when positioned at the very bottom of its range. Similarly, you can set the upper position (100% play speed), which may not need to be at the very top position of the T-bar.

Configure the T-bar as follows:

1 Move the T-bar to the desired position from which play is to start (slightly up from the bottom position to set a landing zone).
2 Press: Press to Set 0% Position.
3 Move the T-bar to the desired position at which play is to reach full speed (slightly down from the top position to set a landing zone).
4 Press: Press to Set 100% Position.

5 Either press to save your settings and return to the Panel Settings menu or press Alternate T-Bar Range to configure the alternate T-bar range, as described in the following section.

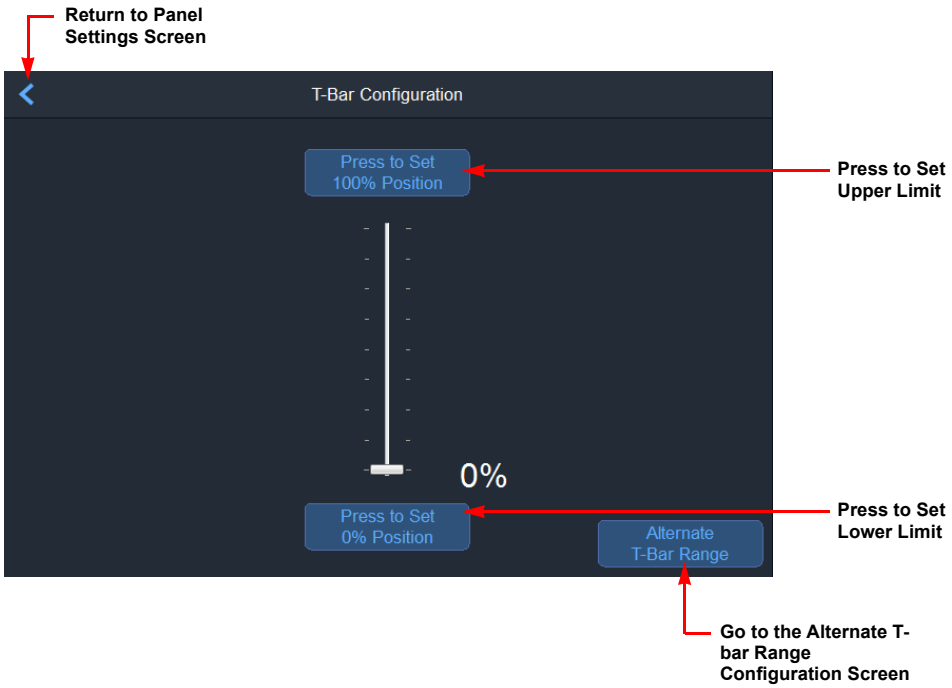


Fig. 4-16: Standard T-Bar Configuration

Configuring the Alternate T-bar Range

This function allows you to set a different speed range from the standard T-bar, for example -100% to +100%, 0% to 200%, or -400% to +400%. Use the configuration screen to configure the alternate T-bar range, with built-in *dead bands* between the upper and lower ranges. The following graphic shows various configurations you might choose for the alternate T-Bar configuration:

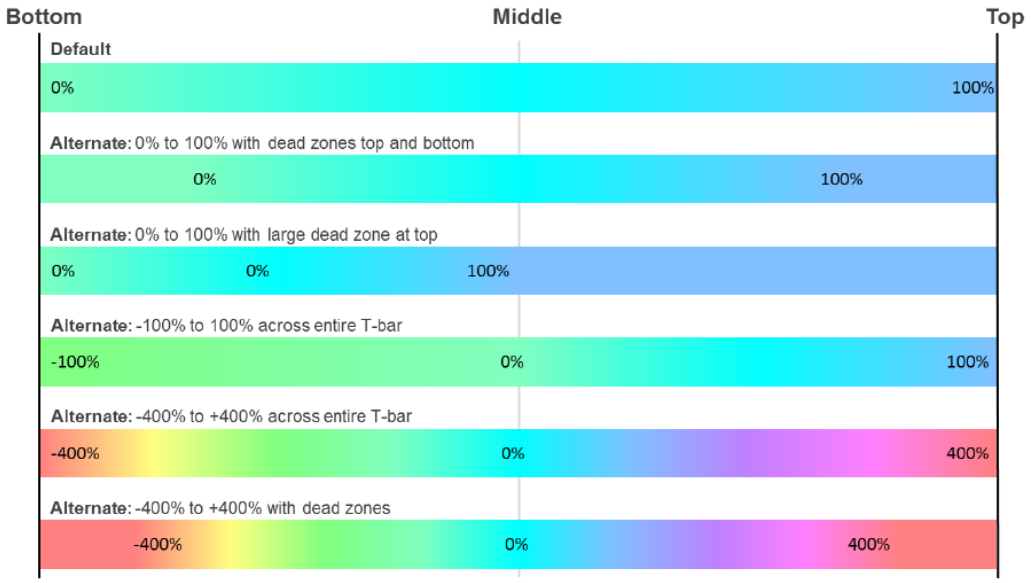


Fig. 4-17: Various Alternate T-Bar Configurations

When using LiveTouch, toggle the alternate T-Bar mode on and off by pressing the keys:

+

or pressing

on the panel touchscreen.

The Alternate T-Bar range provides the following features:

- Configurable range of values between -400% and +400%.
- Configurable *dead band* at the top, bottom or between forward and reverse ranges
- Negative values in the Alternate T-Bar range for reverse playback.
- Alternate T-Bar settings enable you to rock forward and backward through key events.

When the Alternate T-bar range is active, you will see the following icons displayed on the Panel and Desktop:

- Panel:

- Desktop:

The alternative T-bar settings remain active for all T-bar operations until deselected to return to the standard T-bar range.

Configure the Alternate T-bar range as follows:

1 Press:

.

This opens the T-Bar Configuration screen, shown in Figure 4-18.

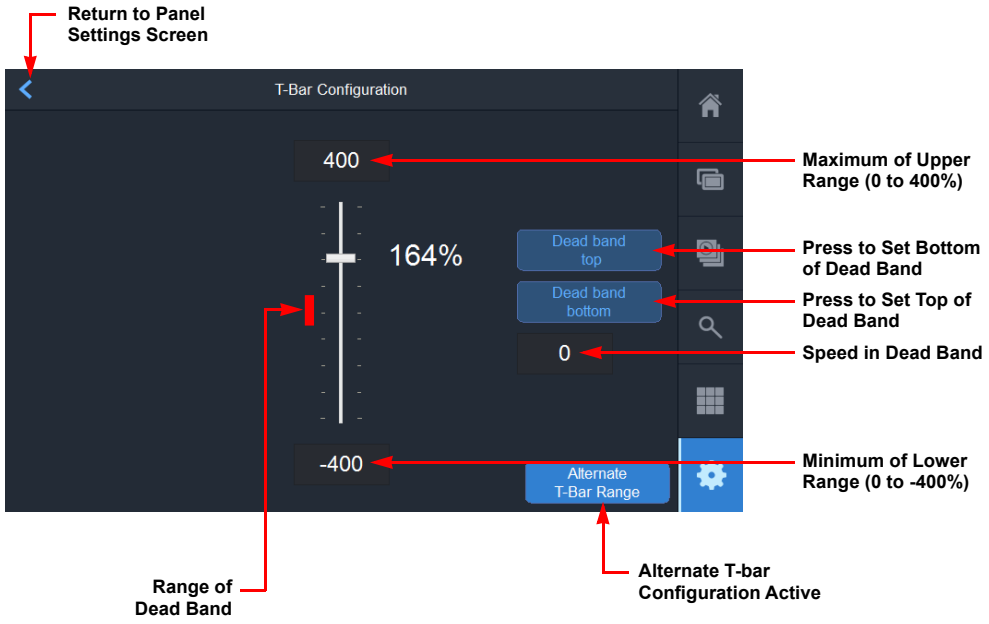


Fig. 4-18: Alternate T-Bar Configuration

2 Move the T-bar to the top, press on the numeric box at the top of the range.

This opens a numeric keypad.

3 Enter a percentage value for the highest play speed into the numeric keypad, then press Confirm.

For example: **400%**.

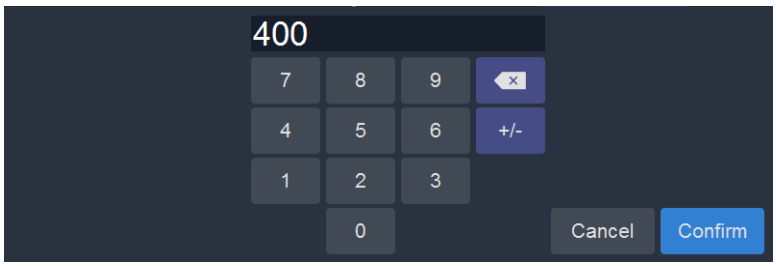


Fig. 4-19: Alternate T-Bar Configuration - Setting Upper Value

The new value is displayed in the numeric box at the top of the range.

4 Move the T-bar to the bottom, select the bottom numeric box and enter a value for the lowest (or reverse) play speed.

Enter reverse speeds as negative values. For example: -**400%**.

5 Move the slider to the point on the scale where you would like to set the top of your *dead band*, then press: Dead band top.

The *dead band* is a zone where play is usually at **0%**, usually in the lower third of the scale. The *dead band* allows you to set a resting position for the T-bar, when in alternate mode, between the positive forward range and the negative reverse range.

6 Move the slider to the point on the scale where you would like to set the bottom of your *dead band*, then press: Dead band bottom.

You will see a red bar to the left of the scale indicating the extent of the dead band.

It is not possible to set a minimum dead band value above the top value of a previously set dead band, or to set a maximum dead band value below the bottom dead band value. In either case, set the opposite end of the dead band first.

> Note: If a dead band speed setting other than 0% is required, enter a value into the numeric box below the dead band top/bottom buttons.

7 Press to save your settings and return to the Panel Settings menu.

Keys Settings

Use this group of settings to configure the operational behavior of the keys on the Panel, including the time the extender keys

and

are active, and the brightness of the keys.

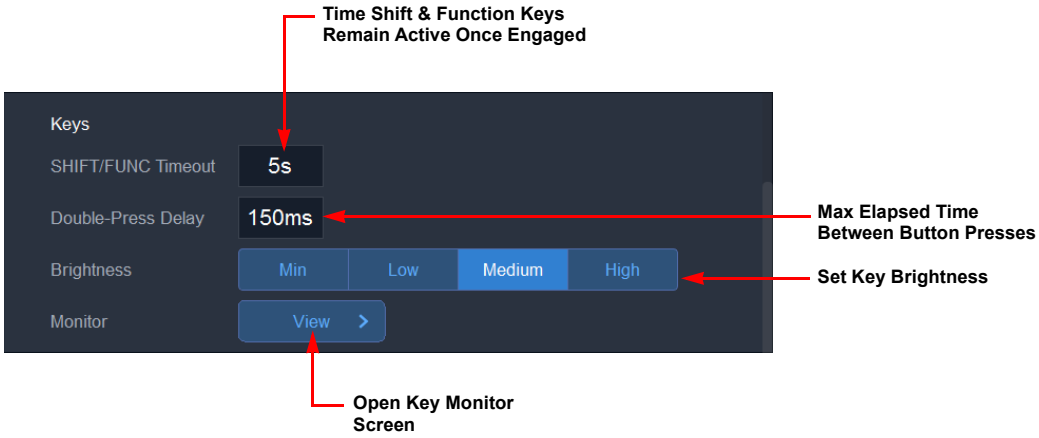


Fig. 4-20: Panel Keys Settings

The configurable options available for the panel keys are as follows:

Option	Description
SHIFT/FUNC Timeout	Defines the active duration following a press of the SHIFT or FUNC keys during which a second button can be pressed to invoke additional functions.
Double Press Delay	The maximum allowed elapsed time between two button presses to define a double-press. For example, two presses of the FAST JOG button to set the operation of the jog wheel. Any longer than this time and the button presses count as two single presses. Default: 150 ms
Brightness	Adjust the brightness of the LED keys on the Panel by selecting one of the following softkeys: Min Low Medium High Default: Medium
Monitor	Press View > to open the interactive Key Monitor screen, see the section *Key Monitor*, below.

Key Monitor

The Key Monitor screen emulates the controls on the Panel. Press any of the buttons, rotate the jog wheel or move the T-bar on the panel to produce a visual response in the corresponding items on the Key Monitor screen to confirm the correct operation of the components on the Panel.

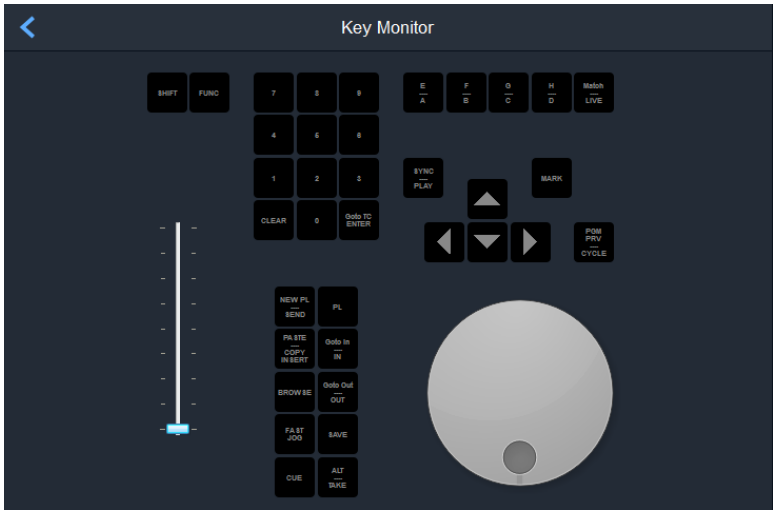


Fig. 4-21: Keys Monitor

When you press a key on the Panel, the corresponding key on the Key Monitor lights to show that the key is active. In addition, movements of the Jog Wheel and T-Bar are also reflected on the Key Monitor.

Screen Settings

Use this group of settings to configure the screen saver, the delay before it becomes active, and the screen brightness.

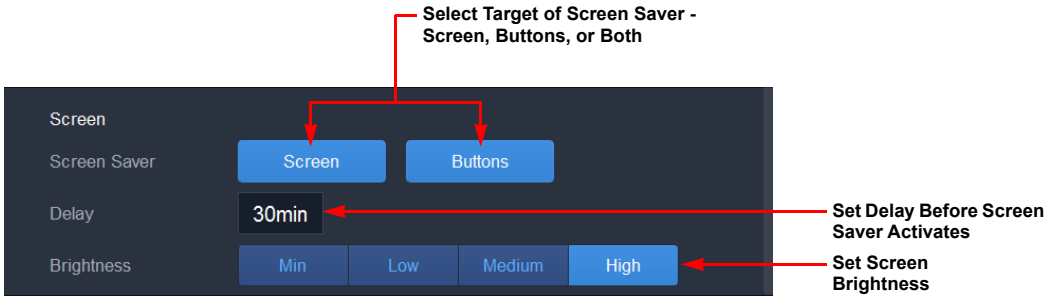


Fig. 4-22: Panel Screen Settings

The configurable options available for the panel screen are as follows:

Option	Description
Screen Saver	Select the screen saver operation from: • Off (screen saver not used) • Screen only active • Panel keys only active • Both screen and panel keys active.
Delay	The period of inactivity that must elapse before the screen switches off or the screen saver is activated, depending on the configuration of the screen saver. Default: 150 ms
Brightness	Adjust the brightness of the LCD touchscreen on the Panel by selecting one of the following softkeys: Min Low Medium High Default: Medium

General Settings

Use this group of settings to configure parameters used in monitoring the Panel hardware.

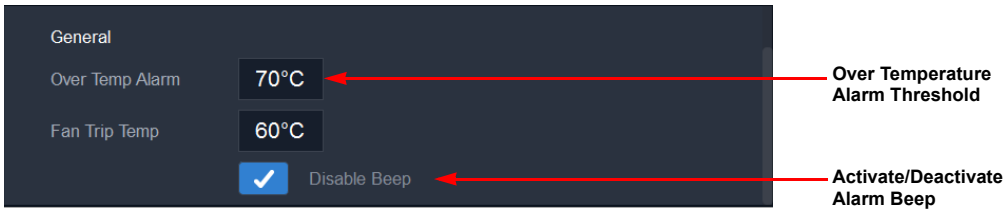


Fig. 4-23: Panel General Settings

The configurable options available for the general panel operation are as follows:

Option	Description
Over Temp Alarm	Set the temperature at which the over-temperature alarm is triggered. Default: 70°C
Fan Trip Temp	Set the maximum temperature at which point the fan cuts in to cool the Panel. Default: 60°C
Beep	If required, press on this box to disable the alert that sounds in the event that the recommended operating temperature of the Panel is exceeded. Default: Off (Beep Active)

Panel Settings: Network Configuration

The **Network** configuration tab enables you to define the following:

- Addressing settings
- Information
- Diagnostics

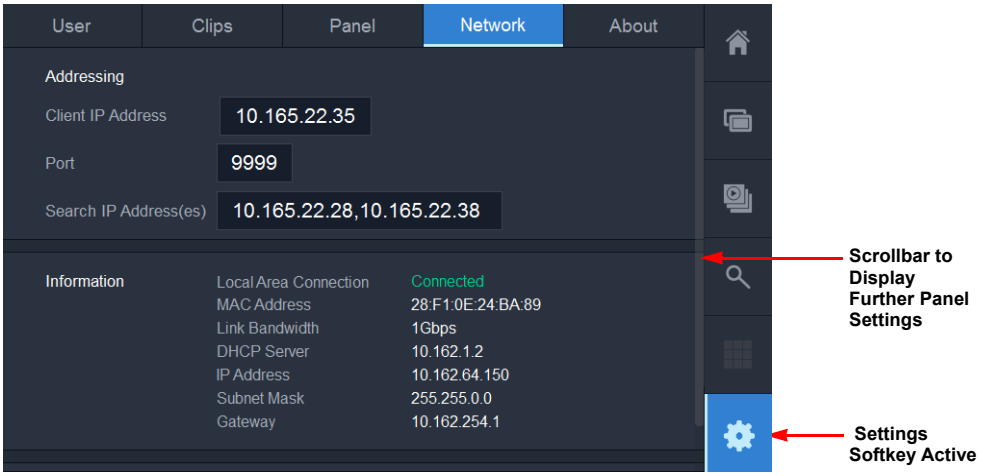


Fig. 4-24: Panel Settings: Network Configuration Menu

Addressing Settings

Use this section to define the IP address and port of the Desktop client, together with any IP addresses of remote video servers that you want to use as a target for Web Bin searches.

Option	Description
Client IP Address	IP address of the Desktop client PC running the LiveTouch Desktop Client application. This setting must be defined on installation to pair the LiveTouch Panel with the required LiveTouch workstation.
Port	TCP port number of the associated LiveTouch Desktop Client. Default: 9999
Search IP Addresses	List of Web Bin host IP addresses used by the Web Bin to access clips on local and remote video servers. Separate each target IP address with a comma, for example: 10.165.22.28,10.165.22.38

Information

The Information section provides details of the system network, including:

- Local Area connection status: (Connected or Disconnected)
- MAC Address
- Link Bandwidth
- DHCP Server
- IP address
- Subnet Mask address
- Gateway address

Diagnostics

The Diagnostics section of the Network settings tab enables you to run the network diagnostic tools ping and tracert to troubleshoot your system network connections.

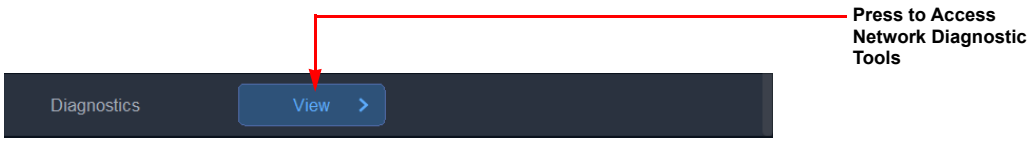


Fig. 4-25: Accessing Network Diagnostics

To run the network diagnostics:

1 Scroll down to the bottom of the Network tab.

2 Press: View .

3 Enter the number of data packets to send into the Packets field.

4 Press either Send Ping or Trace Route as required.

The test results are displayed on the screen, see Figure 4-26 and Figure 4-27 on page 134.

5 Press to return to the Network tab.

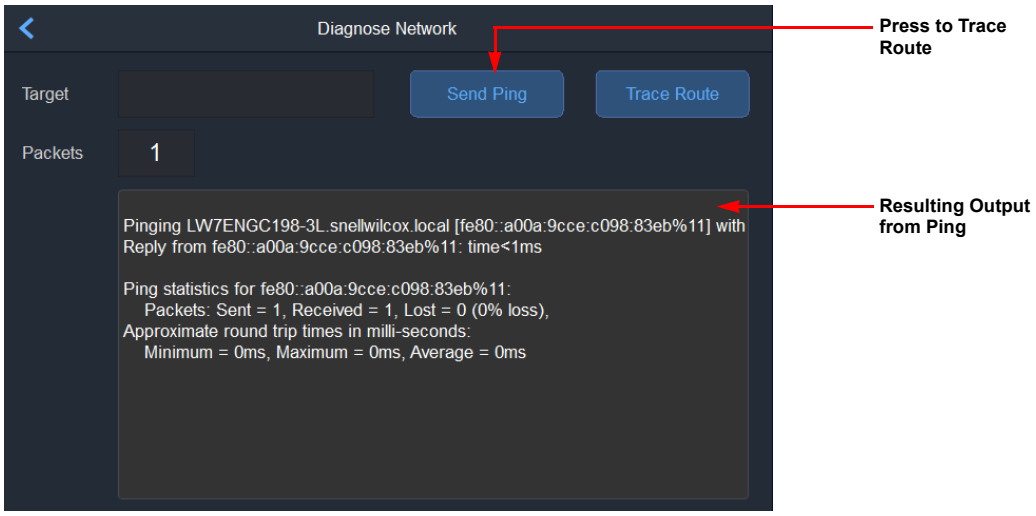


Fig. 4-26: Running Network Ping in Diagnostics

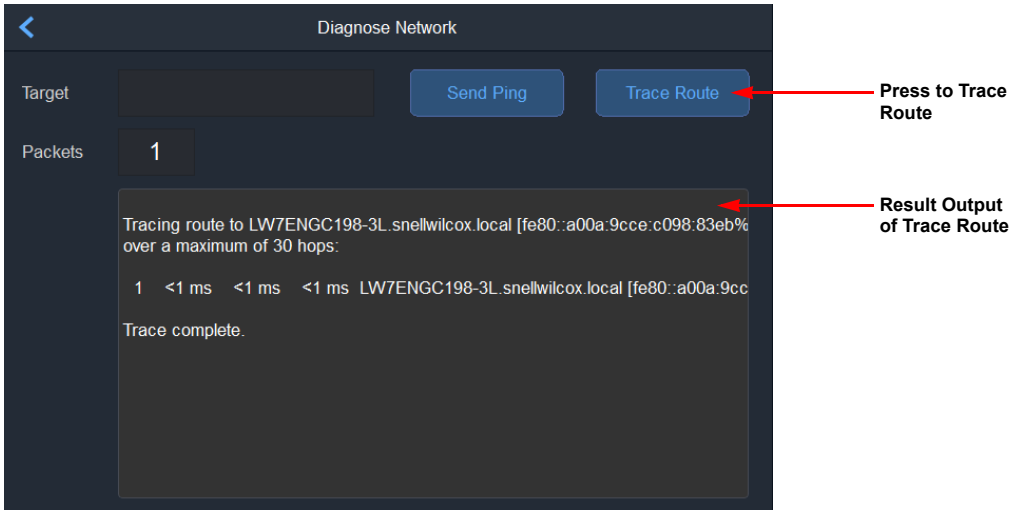


Fig. 4-27: Running Trace Route in Diagnostics

Panel Settings: About Configuration

The **About** configuration tab enables you to define the following:

- System settings
- Alarms settings
- Information settings
- Licensing information

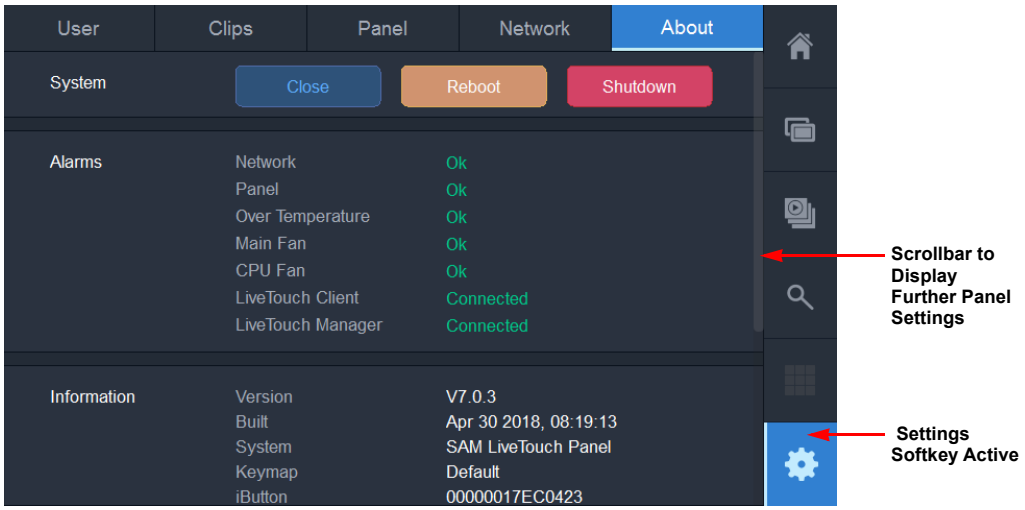


Fig. 4-28: Panel Settings: About Menu

System Functions

This section gives you access to the following administrative functions for the whole LiveTouch system:

Option	Description
Close	Close the application software on the LiveTouch Panel. The Panel software restarts automatically. Use this function when changing configuration parameters such as the Client IP Address and Port.
Reboot	Reboot the LiveTouch Panel. Shuts down the Panel and then restarts it, starting the software automatically once the panel has rebooted.
Shutdown	Shutdown the LiveTouch Panel. Shuts down the Panel completely and does not automatically restart. You can then switch off the Panel.

Alarms

This section of the About tab provides current status and diagnostic information about the following system components and conditions:

- Network
- Panel
- Over Temperature
- Main Fan
- CPU Fan
- LiveTouch Client
- LiveTouch Manager.

The current status of each item is reflected by the message (Ok, Connected, Disconnected, etc.) and the color in which the message is displayed, for example:

- **Connected**: System operating normally, no alarms.
- **Disconnected**: One or more warning conditions exist. Some operations may not work correctly.
- **Connection refused:** A serious error condition exists. This indicates a severe hardware failure and should be investigated immediately.

The color of the Settings menu button also provides a visual indication of an error condition as follows:

Option	Description
	System operating normally, no alarms.
	One or more warning conditions exist. Some operations may not work correctly.
	A serious error condition exists. This indicates a severe hardware failure and should be investigated immediately.

Information

This section of the About tab provides detail about your LiveTouch system that can be useful in the event you need to contact the support organization.

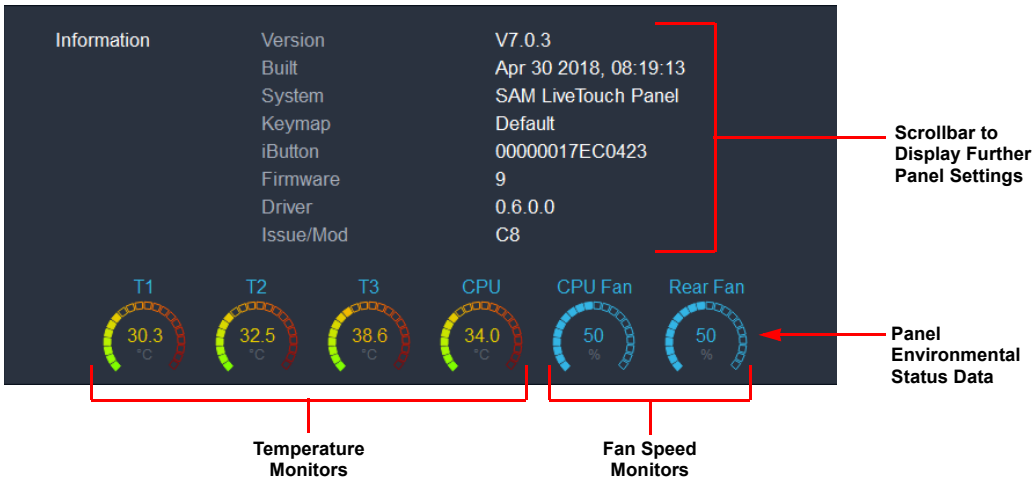


Fig. 4-29: Panel Settings: Status Information

Option	Description
Version	Software version running on the LiveTouch Panel.
Built	Date and time of the system build.
System	Factory reference name for the system.
Keymap	Key layout deployed to the Panel.
iButton	A unique chip serial number on the PCB.
Firmware	Firmware version installed on the Panel.
Driver	Version of the Panel driver software.
Issue/Mod	Version details of the PCB. Used to identify hardware when making requests for product support.
Power	Current status of the power supply to the Panel.

This screen displays the current sensor data about the panel, including:

- Three temperature sensors (T1, T2, T3)
- CPU core temperature
- CPU fan speed
- Rear fan speed

> Note: Fan cooling is used only when required, so fan speeds may read 0 during normal operation.

Licensing

Press View > to display the licensing information for the LiveTouch application.

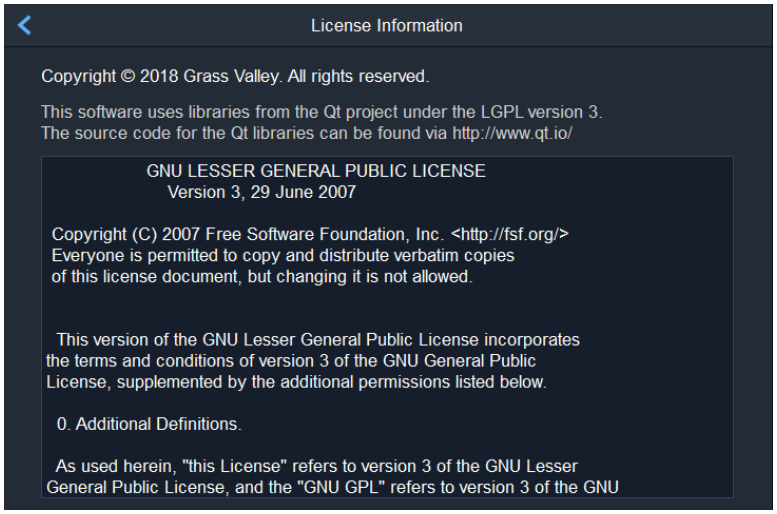


Fig. 4-30: LiveTouch License Information Screen

LiveTouch Port Configurations

The following table lists some of the port combinations supported by LiveTouch for different picture resolutions.

		Supported Port Combinations		
Resolution	**Max Number of Supported Channels**	**MONITOR tab Input Channels**	**PLAYOUT tab Output Channels**	**Total Channels**
Up to 1080i / 720 p (SD, HD or 3G SDI) Combination of bi- and uni-directional ports depending on the configuration	**12**	**10**	**2**	**12**
		8	**4**	**12**
		6	**4**	**10**
		6	**2**	**8**
		4	**4**	**8**
		4	**2**	**6**
1080p	**8**	**6**	**2**	**8**
		4	**2**	**6**
2160p (Each channel 4 x 3G SDI ports) 4 uni-directional channels per LiveTouch server	**4**	**2**	**2**	**4**
		3	**1**	**4**
		1	**3**	**4**

5 LiveTouch Setup on the Desktop Client

Starting and Setting-up the LiveTouch Desktop Application

Setting the Port Owner

To start the LiveTouch Desktop client application:

- Double-click the LiveTouch icon on the Desktop Client GUI: .

  Alternatively, select: **All Programs: Grass Valley: LiveTouch** from the Windows start menu.

  On the first time of starting the screen is mostly blank except for the application bar at the bottom of the screen. The LiveTouch application button is highlighted. You can use the application bar to switch between other applications, if configured.

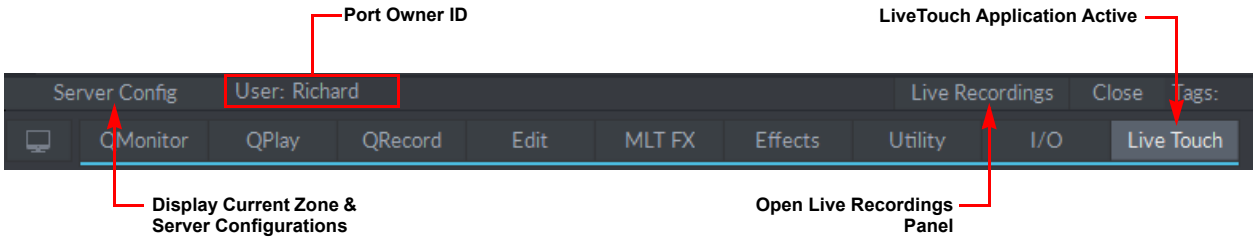


Fig. 5-1: LiveTouch Application Bar

Immediately above the application bar are boxes to access the configuration of output ports, audio patching presets and live recording feeds.

Configuring Playout Ports Using the Desktop

You need to assign a port User ID and configure the playout ports to enable LiveTouch to communicate with the available LiveTouch server channels.

To configure LiveTouch playout ports from the Desktop:

1 Enter a Port Owner ID in the **User** input box.

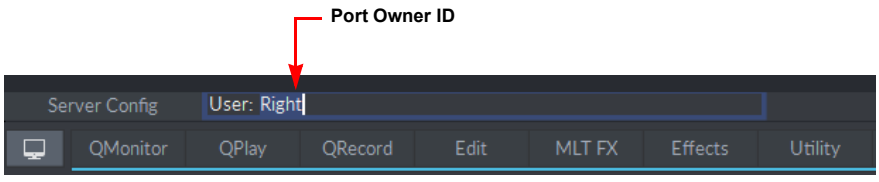


Fig. 5-2: Setting the Port Owner ID

This identifies the current user as the ports are locked to that user, once assigned.

> Note: You must enter a Port Owner ID before taking control of server playout channels.

2 Press the **Server Config** box.

This displays the server channel selection menu, arranged by Zone, Servers and Channel:

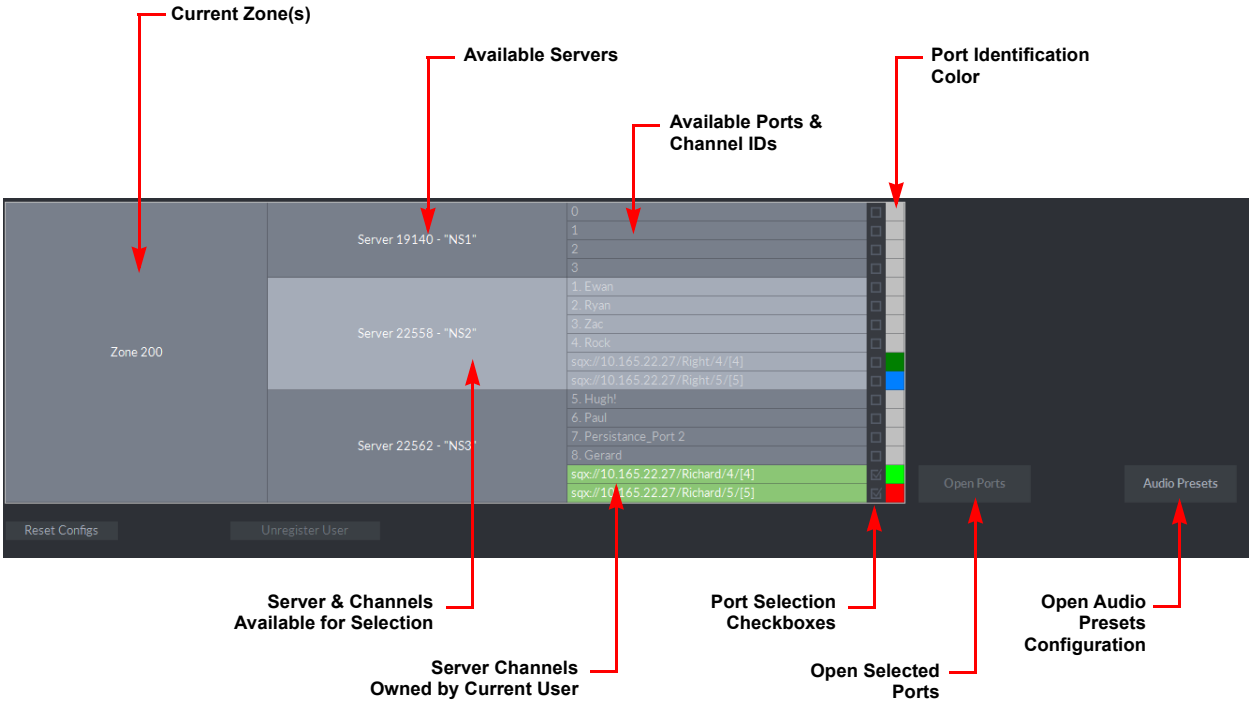


Fig. 5-3: Configuring Playout Ports on the LiveTouch Server

LiveTouch displays server channels that are available for selection in light gray with a checkbox to the right of the channel ID. Any server channels under the control of another owner are dark gray and the checkbox is not available.

Server channels already owned by the current user (as determined by the user ID) have a green background and the corresponding checkbox is selected by default.

3 Select the checkboxes for the required playout channels.

4 Define port identification colors for each of the channels, by pressing on the color pot on a channel row.

When the color palette opens, press the required color to select it.

5 Press the **Open Ports** box.

The server channel selection menu closes and the Port windows open along the top of the Desktop screen - one for each port selected, see the section *Port Window Layout*, on page 153.

Note: If the system is recovering on-going work when the channel windows are created, they are pre-populated with the clip library built previously.

Optional Setup Tasks

If you intend to use various, selectable audio presets, you can configure them at this point. If not, you can skip this stage and configure audio patching presets later, as required.

Defining Audio Presets Using the Desktop

LiveTouch can record and playback, edit, ingest and export files with up to 16 channels of audio.

You can apply input audio channel patching and gain control settings, by channel, on single recordings through the server's web management interface. In addition, you can define output audio patching settings on the LiveTouch Panel or Desktop client.

You can also define a speed range in which the audio can play but for speeds outside this range, the audio is muted. Speed-based audio-mute can be toggled on/off using the Panel touchscreen controls.

The audio presets function enables you to define a list of pre-configured audio input - output mappings that you can apply quickly, as and when required.

If necessary, you can define any audio preset settings at this point, on either the Desktop or Panel, depending on your preference. You can save your settings in this menu, but they can then be selected for audio patching on any clip from the channel windows.

Define audio presets on the Desktop as follows:

1 Press the **Audio Presets** box.

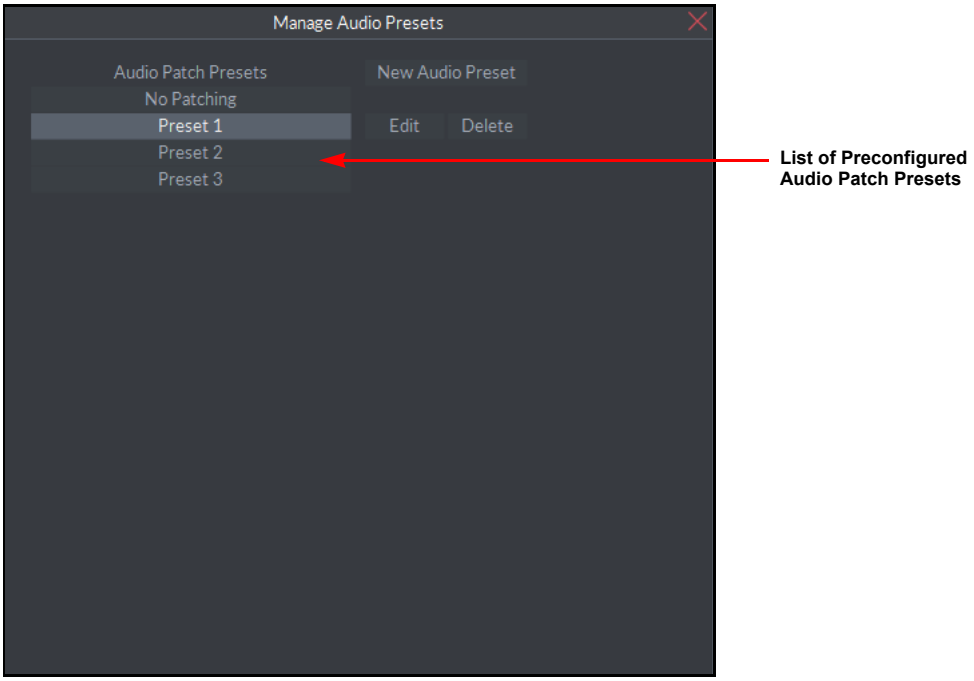


Fig. 5-4: Managing Audio Presets on the Desktop

The **Manage Audio Presets** screen lists any existing audio patch presets.

Press any of the presets then **Edit** to display the patching settings for that preset.

2 Press the **New Audio Preset** box to create a new preset.

This displays a matrix of available audio inputs and outputs.

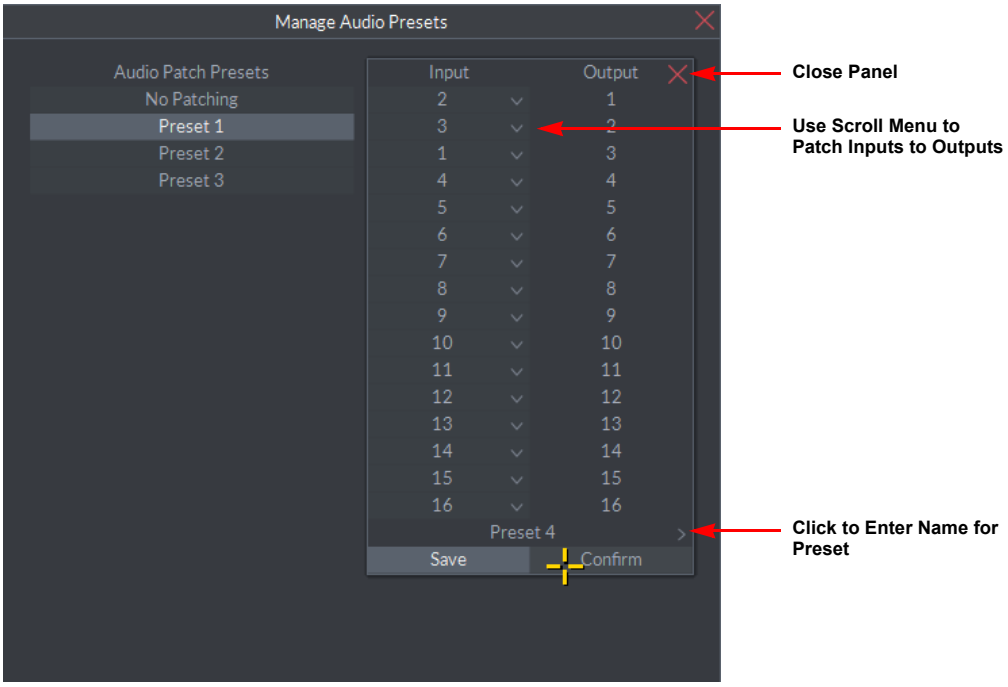


Fig. 5-5: Defining New Audio Presets

3 Define the input and output patching between the audio channels.

4 Enter a name for the Audio Patch Presets and press **Save** then **Confirm** to save the settings as a new preset.

5 Repeat the previous steps as necessary to create as many audio patch presets as required.

New presets are added to the list of Audio Patch Presets.

Selecting Live Recordings

To select live recordings for use in LiveTouch:

1 Press the **Live Recordings** button, just above the application bar at the bottom of the screen.

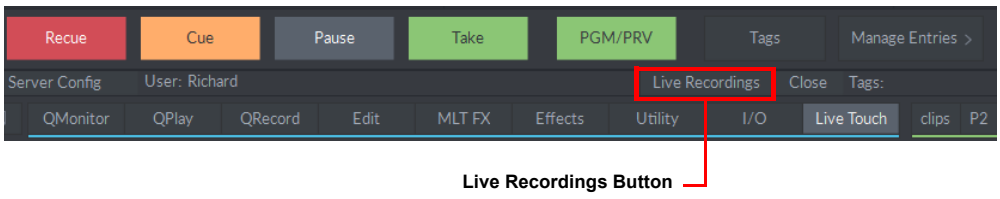


Fig. 5-6: Opening the Live Recordings Configuration Window

Any live recordings configured by way of the LiveTouch Server are displayed.

2 Select the appropriate checkboxes to choose the recordings to monitor.

To select all available channels, select the **Select All** checkbox.

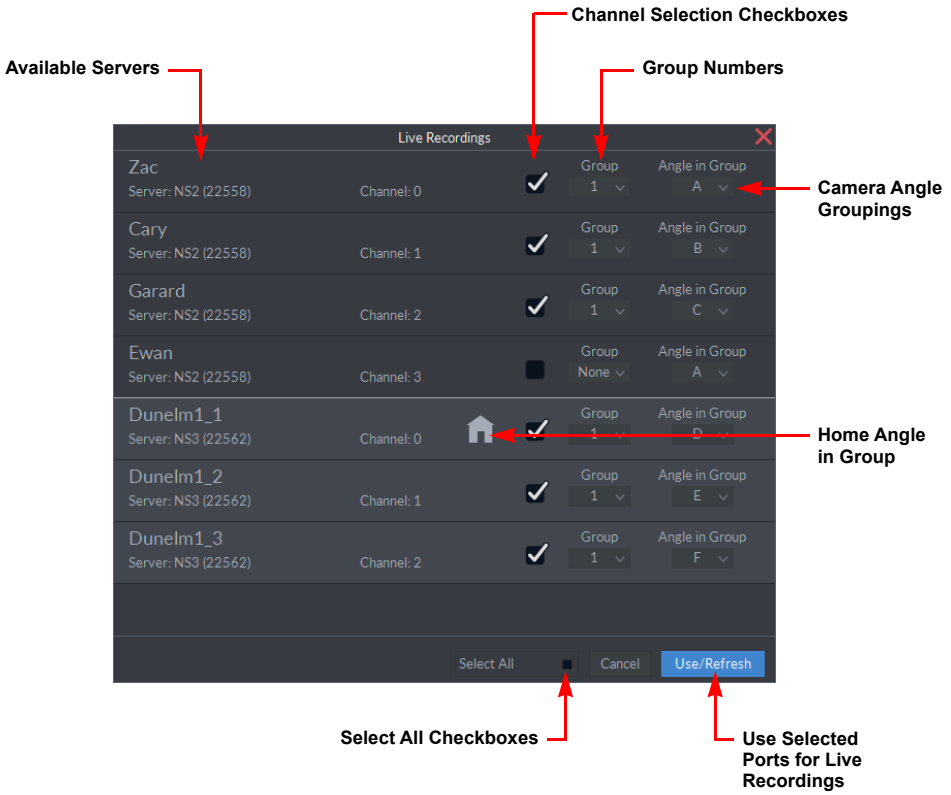


Fig. 5-7: Defining Live Recordings

3 Click Use/Refresh to save your changes and use the selected channels for the live recordings being monitored.

The **Refresh** function is also useful when elements such as recording names are changed.

LiveTouch displays the available channels you can select in a series of tabs directly below the Port windows on the Desktop.

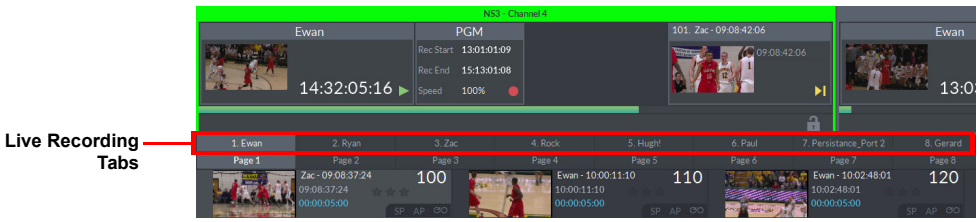


Fig. 5-8: LiveTouch Live Recording Tabs

To switch to a different live recording, click the appropriate tab or use the live recording key on the Panel, possibly in combination with the camera number, for example:

12 + MATCH LIVE.

Grouping Multiple Camera Angles in Live Recordings on the Desktop

When selecting the live feeds for your LiveTouch system, you can create several multi-cam groups on a single server or combine channels from different servers into customized multi-cam workflows.

To group two or more recordings together when using multiple camera angles of the same footage:

1. Press the **Live Recordings** button, just above the application bar at the bottom of the screen.
2. Select the appropriate checkboxes to choose the recordings to monitor.
3. To group two or more recordings together, select the same group number from the scroll box to the right of each recording channel row and assign a camera angle.

   LiveTouch mirrors most actions (excluding publish, send to, and export) applied to a grouped live recording to all other recordings in the same group.

Switching Between Live Recordings on the Desktop

On the Desktop display, LiveTouch displays all available live recordings in a series of tabs immediately below the channel windows. To display a live recording in the current Port window (either **PGM** (program) or **PRV** (preview) depending on the mode) press one of the live recording tabs.

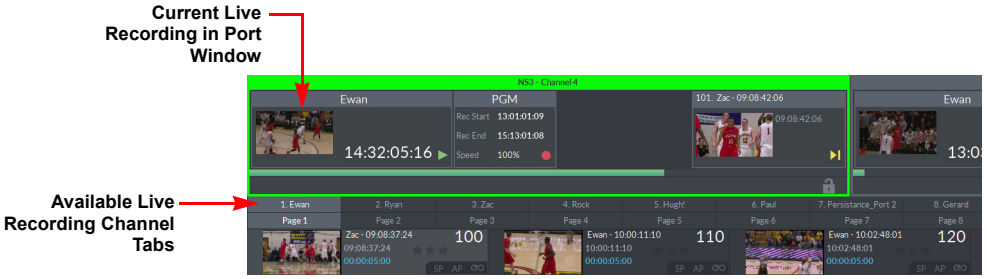


Fig. 5-9: Recording Channel Tabs on Desktop

Always in Record (AiR) on the LiveTouch Server

Setting a LiveTouch Server record port to *Always in Record* puts it in a state to record continuously, ensuring ensure that you do not miss any incoming media. A port is assigned a record buffer of a specified length and as the record head nears the end of its buffer, LiveTouch adds new space and trims back the beginning of the record to free-up storage space accordingly.

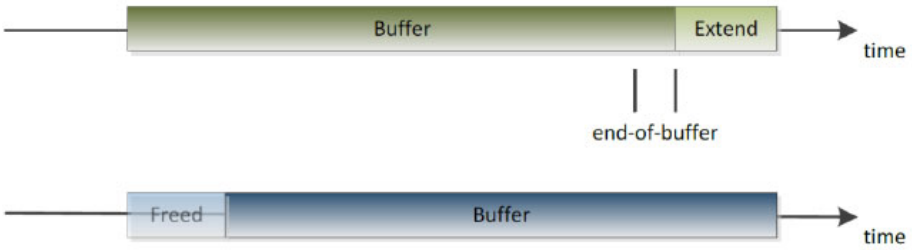


Fig. 5-10: Schematic Representation of the Always in Record Feature

You can use the Ingest tab of the Home page on the LiveTouch Panel to pause, or even stop active recordings, see the section *Pausing or Stopping Active Recording*, on page 16.

LiveTouch Server V 2.3 software adds the following features to the AiR functionality:

- Pause the AiR recording
- Stop the AiR recording and manage the recording according to the length of time the server is switched off.

Should a server be rebooted, the record persistence option, available on the server configuration web page (**Configure > SDI Channels > Record Settings > Record Persistence**) ensures that if the server has restarted with the port in AiR mode, then the recording is restarted and will have the same identity as before the restart. See the *LiveTouch Installation Guide* for more information on this feature.

6 LiveTouch Desktop Application

Overview of the LiveTouch Desktop Client Application

The LiveTouch Desktop client application mirrors the panel operation, while providing a more detailed overview of the content of the clips library and playlists. Changes made in one are reflected dynamically on the other. In addition, the Desktop application provides links to other applications by way of the Application bar (depending on your system configuration.)

Fig. 6-1: LiveTouch Panel and Desktop Client Application

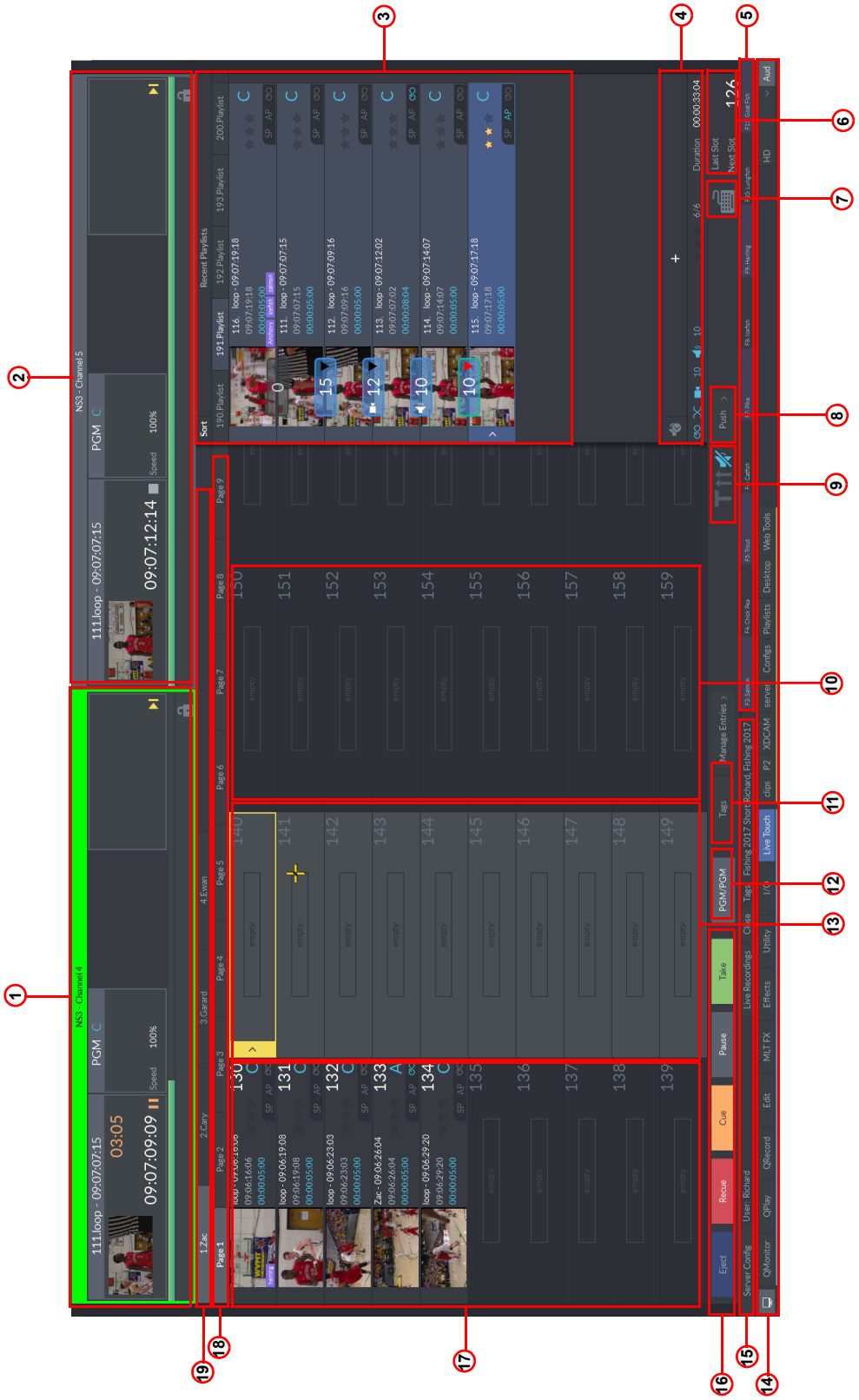
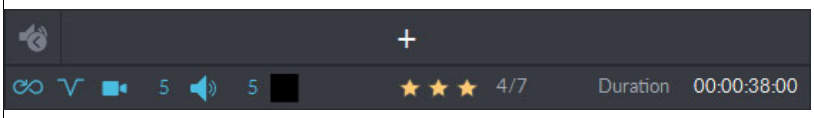
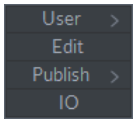
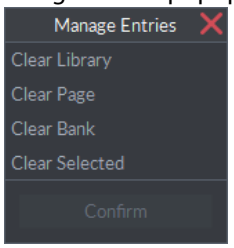
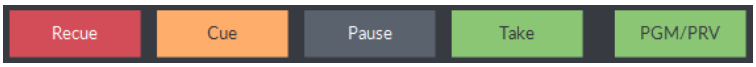


Fig. 6-2: Overview of Desktop Screen Components (see key overleaf)

Key to Figure 6-1 on page 149:

Component	Description
1	Port window 1
2	Port window 2
3	Playlists
4	Playlist tools.  Provides tools to set characteristics for the playlist, including looping, transitions, and stars. In addition, provides access to split audio mode and displays the order of the selected clip together wit the total duration of the playlist.
5	Function keys assigned to LiveTouch tags.
6	Last used slot and next available slot in the clips library.
7	Activate or deactivate the external keyboard to prevent unwanted key presses: or .
8	Push pop-up menu. Allows you to push a clip to another user, publish a clip to the server or work with the integrated Edit and IO applications. 
9	Mode indication icons: • Alternate T-Bar on or off: or . • Sync play on or off: or . • Audio mute on or off: or .
10	Clips library: Page **1**, Bank **2**, Slots **0** through **9**. All slots empty.

Component	Description
11	Manage entries popup menu: 
12	Tags pop-up menu. Opens the available tags sheets for editing.
13	Clips library: Page **1**, Bank **1**, Slots **0** through **9**. All slots empty.
14	Application Bar. Provides access to LiveTouch and other integrated applications, depending on your system configuration.
15	Server and user configuration options.
16	Play controls and PGM/PGM or PGM/PRV mode switch. 
17	Clips library: Page **1**, Bank **0**, Slots **0** through **9**. Slots 100, 101 and 102 containing clips; all other slots empty.empty.
18	Tabs to access the Pages of the Clips library.
19	Live bar - lists the available live recordings / camera feeds.

Using the Port Windows & Live Recording Tabs

Port Window Layout

The LiveTouch Desktop screen features two **Port Windows** along the top of the screen.

The port windows display the active recording or cued clip, according to the playback mode selected, which can be either:

- Program/Program (PGM/PGM) or
- Program/Preview (PGM/PRV).

Without a live recording or clip selected to play-out, the port window will initially be empty. Figure 6-3 shows the different components of a populated port window.

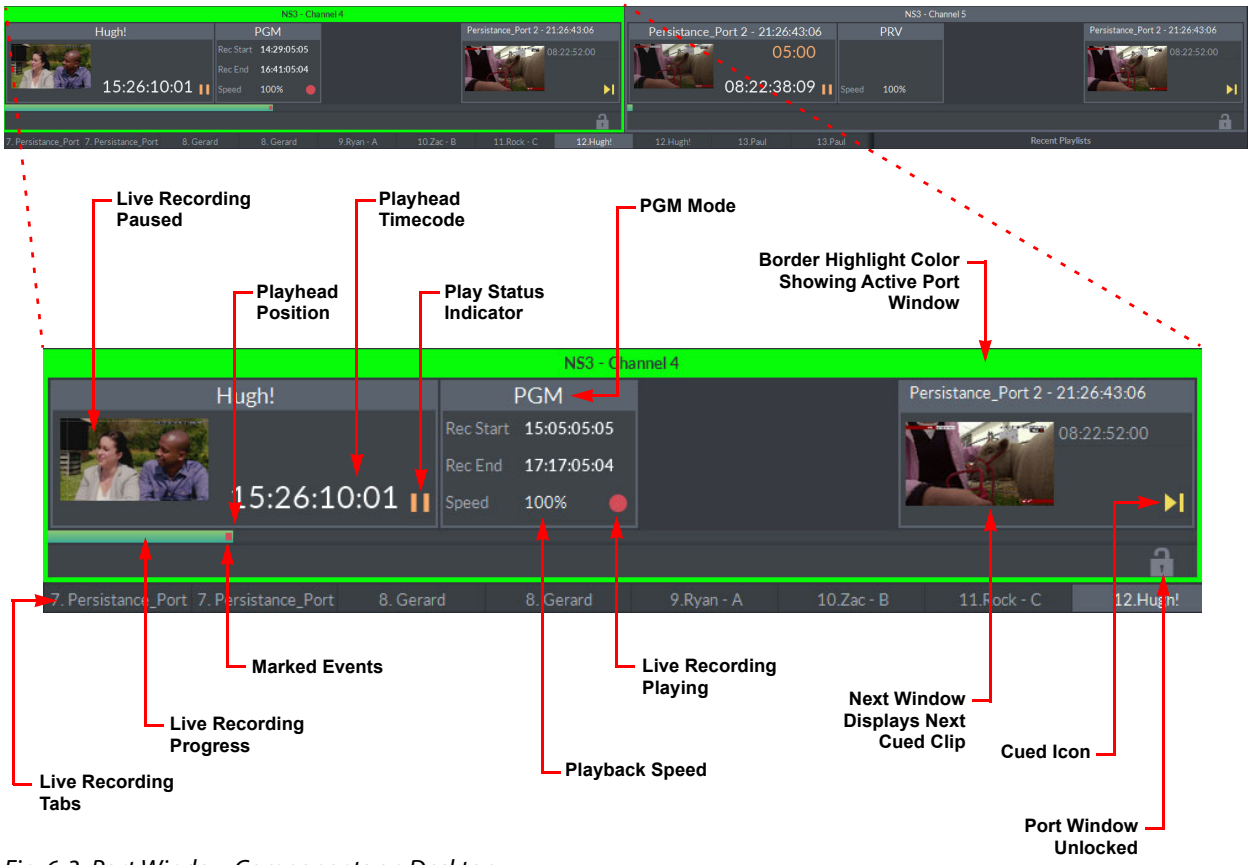


Fig. 6-3: Port Window Components on Desktop

The **live recording tabs** immediately below the port windows display the available live recordings. You can select any of the live recording tabs to play in the port windows. For more information, see *Selecting Live Recordings*, on page 145.

Switching Between Port Windows

The border of the currently selected port window is highlighted with the color defined in the color palette when configuring the channels. It is recommended to choose two contrasting colors for visibility.

To switch between port windows, either:

- Press

on the LiveTouch Panel to cycle between each port window.
- Press the **Tab** key on the keyboard.
- Click the mouse cursor in the target port window.

For more information, see the section *Using the LiveTouch Play-out Modes*, on page 159.

Adding Recording Clips

In addition to the live recordings you can also work on a clip saved on a server.

To add a server clip to the current port window:

- Open the server bin and drag a clip onto the port status area at the top of the port window.

This creates a new live recording tab, with the name of the dragged clip, below the port windows. From this, you can select events and save them as clips to the library in the same way as with other live recordings.

Other feeds can then be dragged and dropped onto the port status area. Each displays as a separate live recording tab. The tabs take the name of the feeds added. The currently selected tab is displayed in a lighter shade of gray.

Using the Live Recording Tabs

The live recording tabs are displayed immediately below the port windows and are usually numbered.

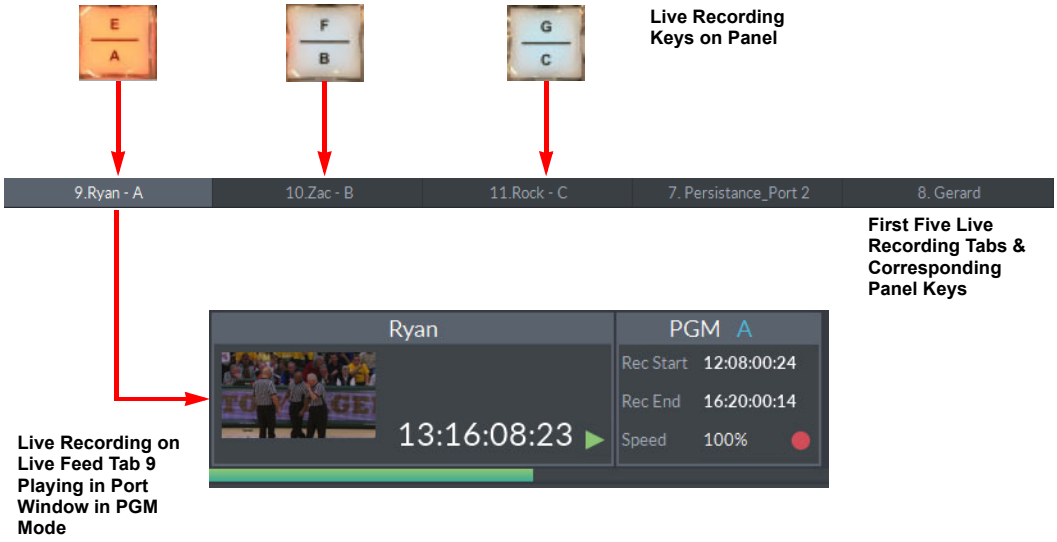


Fig. 6-4: Live Recording Tabs & Corresponding Panel Keys

Switching Between Live Recording Tabs

Switch between the live recording tabs using any of the following methods:

- Press directly on one of the available live recording tabs.
- Press the corresponding live feed key: on the LiveTouch panel.

  If there are more than four active live recording tabs, press then the appropriate button for live feeds **E**, **F**, **G** or **H**.
- Enter *<Live_Feed_Tab_Number>* then press .

  Th Live key is lit red to indicate that live recordings are being received.
- For example: then switches the active port window to the live recording on tab **9**.

  See the chapter *Understanding the Panel Controls*, on page 27 for more information on the Panel keys.

Renaming a Live Recording Tab

To edit the name or number of a live recording tab:

Right-click on the tab and select **Rename** (or **Rename Angle** for grouped recordings) from the popup to open the soft keyboard. All clips in the library from that tab are also renamed accordingly.

Closing a Live Recording Tab

To close a live recording tab:

1 Hover the cursor over the top-right corner of the live recording tab and press .

2 Select the relevant option from the **Close Tab** popup menu:

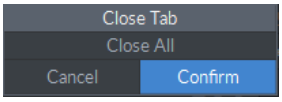


Fig. 6-5: Close Live Recording Tab Popup

3 Press: Confirm .

Option	Description
Close Tab	Closes the currently selected live recording tab. This action requires a secondary action of pressing on the Confirm box that displays.
Close All	Closes all live recording tabs. This action requires a secondary action of pressing on the Confirm box that displays.
Confirm	Confirm the Close action.
Cancel	Closes the menu without making any changes.

Using the Desktop Play Controls

Using the Play Controls in the Port Window

The play controls consist of several buttons with dedicated functions, that you can use as an alternative to the play control keys on the panel.

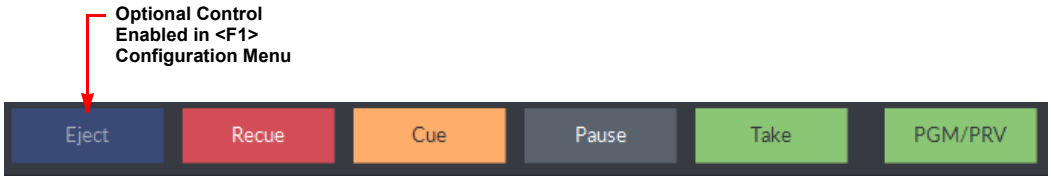


Fig. 6-6: Play Controls for the Active Port Window

These play controls have the following functions:

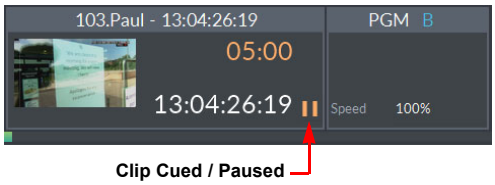
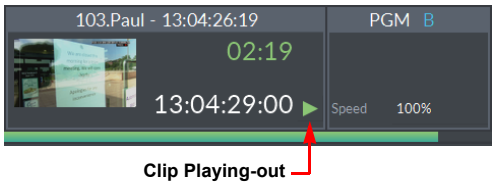
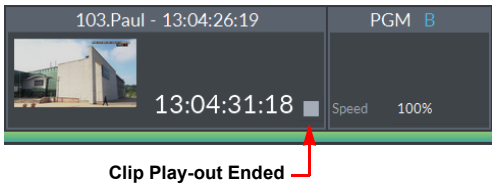
Control	Description
Eject (Optional Mode)	Optional Eject mode can be enabled in the <**F1**> Configuration menu, see the section *Enabling the Eject Function*, on page 195. When you enable Eject mode, any clip that finishes playing-out must be ejected manually from the port by pressing Eject before pressing Cue for the next clip. If you press Cue without ejecting the previous clip, the cue action will have no effect.
Recue	Re-cues the current clip that is currently playing, or the last clip that has finished playing, in the active port window.
Cue	Cues a clip, selected with the cursor, from the clips library or a playlist and changes the clip status from next to be cued (displayed in the Next window), to cued. Pressing Cue when a clip is already cued or paused aborts the cued clip (its status changes to complete) and cues the next clip (from the Next window).
Pause	Pauses the clip at the current frame and its status changes to Paused.
Take	Plays-out the cued clip. The play offset bar changes to green while the clip is playing. If you press Take again for the next clip which hasn't yet been cued, the clip plays-out immediately.
PGM/PRV PGM/PGM	Toggles between the **Program/Program** mode and **Program/Preview** mode. In Program/Preview mode the button is green and the label displays **PGM/PRV**. In Program/Program mode the button is gray and the label displays **PGM/PGM**.

- Enter a clip number and then press **Cue** or **Take** to cue the clip or play it out automatically. For example:

  102 Goto TC ENTER Cue will cue the clip in slot 102, or

  102 Goto TC ENTER Take will play-out the clip in slot 102.

The following table shows the effect the different play controls have on a clip selected from the clips library.

Action	Effect on LiveTouch
Select a clip in the library, then press: Cue	Clip cued in the port window: 
Play the clip, press: Take	Clip cued in the port window: 
Clip play-out complete. (If optional eject mode enabled, press: Eject to clear clip from the Port window)	Clip cued in the port window: 

Using the LiveTouch Play-out Modes

LiveTouch provides the following two switchable playout modes:

- Program/Program mode (**PGM/PGM**)
- Program/Preview mode (**PGM/PRV**)

These play-out modes are described in the following sections.

You can switch between play-out modes using either:

- The play control softkeys: PGM/PRV and PGM/PGM on the Desktop or,
- The Panel keys:

+

.

When in either play-out mode, you can cycle the active window using the panel keys as follows:

In PGM/PGM mode:

- Press the

key.

In PGM/PRV mode:

- When the PGM window is active, pressing the green:

key switches to the PRV window.
- When the PRV window is active, pressing the red:

key switches to the PGM window.

When using the LiveTouch Desktop or Panel touchscreen, you can also distinguish between the active and inactive Port windows by the color of the border, which is defined when configuring the channel ports.

You can also switch the active port window by clicking the mouse cursor in the target port window or by pressing the **Tab** key.

Working in PGM/PGM Mode

In this mode, you have two play-out port windows that you can operate independently of each other.

Example Scenario:

1 Select the active PGM port window so that the window border is highlighted in the port color.

2 Select a clip in a playlist or the clips library.

The selected clip is displayed in the Next window of **both** Port windows

3 Do either of the following:

a Press Cue.

The clip moves to the active PGM Play-out window with status **cued**: ⏸.

b Press Take.

The clip starts to play in the PGM Play-out window.

Or:

a Press Take.

The clip starts to play immediately in the play-out window.

To play-out another clip in the other port window:

4 Select the second PGM window so that the border is highlighted.

5 Repeat the steps above for the desired clip or playlist.

Working in PGM/PRV Mode

In this mode, you use the play-out and preview port windows in combination to play-out the content in the PGM Play-out port window and to preview content in the PRV Preview port window.

> Note: In PGM/PRV mode, the following User Settings affect the interaction between the PRV and PGM windows:
>
> - PRV Edit in Playlist
> - PGM/PRV Sync-Play Auto Switching
> - PGM/PRV - TAKE Plays At 100%

Example Scenario: No clips in Either PGM or PRV Play-out Windows:

1 Select the PRV port window so that the window border is highlighted in the port color.

2 Select a clip in the clips library.

The selected clip is displayed in the Next window of **both** Port windows

3 Press CUE.

The clip moves to the PRV Preview window with status cued: ⏸.

4 Preview the content in the PRV Preview window using the shuttle wheel or other LiveTouch navigation controls, as required.

5 If the content is ready to play-out, press ALT / TAKE.

Depending on the configuration of User setting **PGM/PRV -TAKE Plays At 100%**, either:

- When selected: ✓ PGM/PRV - TAKE Plays At 100%, this action:
  - Mixes the content across to the PGM play-out window and plays-out immediately at 100% speed.

- When deselected: ✗ PGM/PRV - TAKE Plays At 100%, this action:
  - Mixes the content across to the PGM play-out window with status cued: ⏸.

- Press

.

  The content starts to play-out from the PGM Play-out window at the same speed as the previous clip in the PGM window.

  If **Sync Play** is also selected, then the content will play in both PGM and PRV port windows. If **Sync Play** is not active, the content will play-out only in the PGM port window.

Example Scenario - Loading a Playlist in PGM/PRV mode:

Assuming the User settings option **PRV Edit in Playlist** is selected (active):

1 Select the PRV port window so that the window border is highlighted in the port color.

2 Select a clip in the playlist.

  The selected clip is displayed in the Next window of **both** Port windows and is loaded into the PRV Preview window with status cued: .

3 Press

.

  This mixes the content across to the PGM play-out window and plays-out immediately at 100% speed, depending on the setting of the User option: **PGM/PRV -TAKE Plays At 100%**.

  If **PGM/PRV -TAKE Plays At 100% is deselected**, the content is first mixed across to the PGM play-out window with status cued: .

  Press

(when Sync play is off) or

(when Sync play is on) to play out the clip from the PGM Playout port window.

If the User settings option **PRV Edit in Playlist** is deselected (inactive), when you select a playlist clip in step 2 above, the clip is loaded into the PGM:

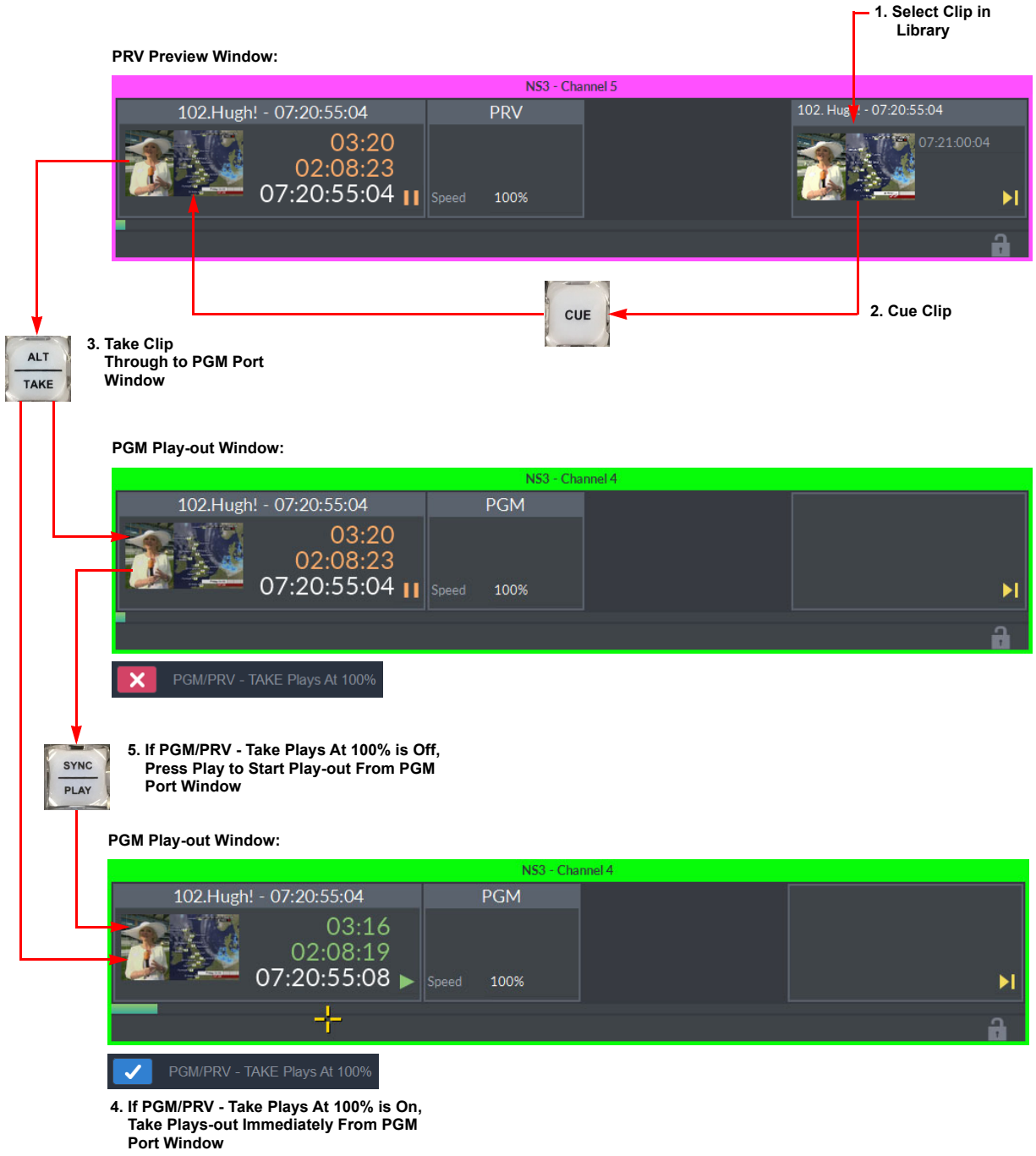


Fig. 6-7: Taking a Clip from Preview Through to Program Window

Using the Clips Library

The clips library displays all saved clips stored in a **Page**: **Bank**: **Slot** structure.

Fig. 6-8: Clips Library Components on Desktop

Clips Library

The library presents saved clips in a view where the clips are shown stored in numerical order across a set of pages.

> Note: If there are no active playlists the library displays across the full screen. You can change the displayed size of the library window by dragging the bottom-right corner of the window to the left or right.

The library comprises **nine pages**, each having **ten banks** (columns) with **ten slots** to each bank, allowing you to save up to **900 clips**, each with a unique numeric identifier.

> Note: If a clip is saved to more than one slot it has more than one numeric identifier.

For more information on the structure of the clips library, see *Saving Clips to the Library*, on page 49.

Navigating the Library

Using the Panel

To navigate the library using the LiveTouch panel, see *Navigating Through the Clips Library*, on page 54.

Using the Keyboard

Use one of the following methods to navigate through the clips library using the Desktop keyboard:

- Use the Left and Right cursor keys to move to the previous or next **Bank** respectively.
- Hold <**ALT**> and use the Left and Right cursor keys to move to the previous or next **Page** respectively.
- Enter a three-digit **Slot** number on the keypad and press <**Enter**>, to go directly to the clip in that slot (or the empty slot.)

Using the Mouse

Use one of the following methods to navigate through the clips library using the Desktop mouse:

- Press on a **Page** tab to display that page.
- Use the mouse wheel to scroll up or down the current **Bank**.
- Press and hold the Left mouse button, then drag left/right to display **Banks** to the left or right of the current view.
- Press on a **Slot** to access the clip in that slot.

Managing Library Entries

Press the Manage Entries > softkey, to the right of the play controls.

This opens the Manage Entries popup menu, shown in Figure 6-9:

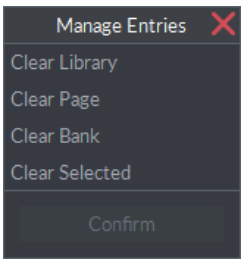


Fig. 6-9: Manage Entries Popup Menu

Use the options in the Manage Entries popup menu as follows:

Option	Description
Clear Library	Removes all clips from the library.
Clear Page	Removes all clips from the currently selected page.
Clear Bank	Removes all clips from the currently selected bank.
Clear Selected	Removes the currently selected clip(s) from the library.

Clip Details

Each recorded clip stores the following information:

- Title
- Duration
- Start Timecode
- Library slot number
- Camera angle (when using multi-cam recordings)
- Default playback settings (speed, audio patching, looping)
- Tag and star rating.

Default Playback Settings

In the library each clip is assigned the default playback settings on saving. You can modify the settings in the library, or change them for play-out purposes when added to a playlist.

Audio Patching

The audio patching should be defined in advance before selecting a patch setting. For more information, see the section *Audio Settings*, on page 113.

To set the audio patching for a clip from the Desktop:

1 Select a clip (or number of clips if they are to use the same audio patch).
2 Either press **AP** in the clip details, or right-click and select **Audio Patching** from the Options menu.
3 Press on the title of the required patch setting from the list.
4 Press **Confirm**.

A clip assigned audio patching is highlighted **AP** in the clip details.

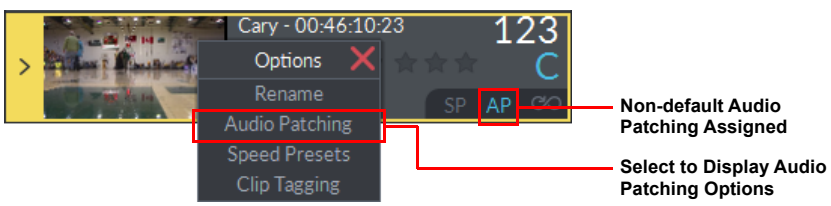


Fig. 6-10: Clip Options Menu Showing Audio Patching

Setting a Constant Speed Slo-mo

If necessary, you can set the playback speed for a clip to slo-mo either at a steady rate or a variable speed, using a speed profile, without manual interaction each time the clip is played.

To set a constant speed slo-mo:

1 Select a clip (or number of clips if they are to be set to the same speed).

2 Either press **SP** in the clip details, or right-click and select **Speed Presets** from the Options menu.

3 Select one of the preset speeds, for example **60%**.

4 Press **Confirm** to make the change and close the **Speed Presets** box.

Clips containing a speed setting are highlighted **SP *n*%** in the clips details, where ***n*** is the percentage of full speed.

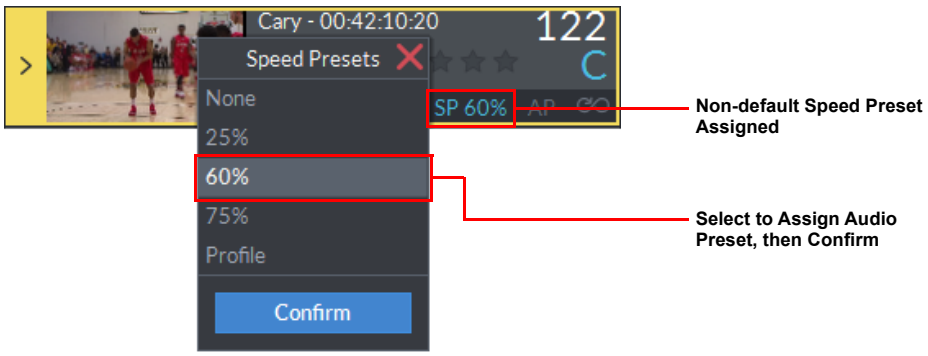


Fig. 6-11: Clip Options Menu Showing Speed Presets

Setting a Speed Profile

To set a speed profile to achieve a variable speed playback:

1 Select a clip (or number of clips if they are to be set to the same profile).

2 Either press **SP** in the clip details, or right-click and select **Speed Presets** from the options menu.

3 Select **Profile** from the Speed Presets menu.

4 Press **Confirm**.

This displays the axes of an empty profile graph.

5 Use the Jog Wheel to shuttle or jog to a position in the clip where the speed profiling is to start.

6 Set the required speed using one of the following methods to add keyframes to the profile:

- Adjust the T-bar then press

to set the speed at that point, or
- Enter a speed value (as a percentage) on the numeric keypad then press

.

7 Repeat steps 5 - 6 to add as many keyframes as required for the speed profile.

8 Press

.

9 Close the profile graph by pressing in the top-right corner.

Clips containing a speed setting are highlighted **SP** in the clips details.

For an example of a speed profile created on the Panel, see the section *Setting a Variable Speed Profile for Slo-mo Playback*, on page 58.

> Note: Setting the speed down to 0% introduces a pause that requires you to press

to restart play at 100% from this point. A break in the profile line is shown, and the next frame is automatically inserted at 100% play speed.

You can add multiple pauses to a clip. In this instance the color of adjacent sections are shown in alternating shades of light- and dark-blue immediately after each pause, making the start and end of each pause clearly visible.

Deleting a Speed Profile

To delete individual keyframes:

1 Use and to step backward and forward through the keyframes.

2 Press

then

to remove the selected keyframe.

To remove the entire, current speed profile:

- Press the **Clear** button displayed at the top-left of the Speed Profile window, then press

.

Looping a Clip

You can choose to *loop* one or more clips so that clips included in the loop are replayed continuously until stopped.

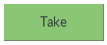
To loop a clip:

- Press the icon.

  The icon changes to showing that looping is active.

  When a clip is played as one of a selection of clips, the looped clip continues to play until you press

, at which point the next clip in the sequence starts.

  If more than one clip in a sequence is set to loop, you must press 

to advance to the next clip each time a looped clip is playing.

You can also set-up looping directly from the LiveTouch panel, see the section *Assigning the Loop Function to a Clip or Clips*, on page 63.

Switching Camera Angles

If a library clip consists of a group of saved multi-cam clips, a selected camera angle indicator is displayed in the clip details of the library entry.

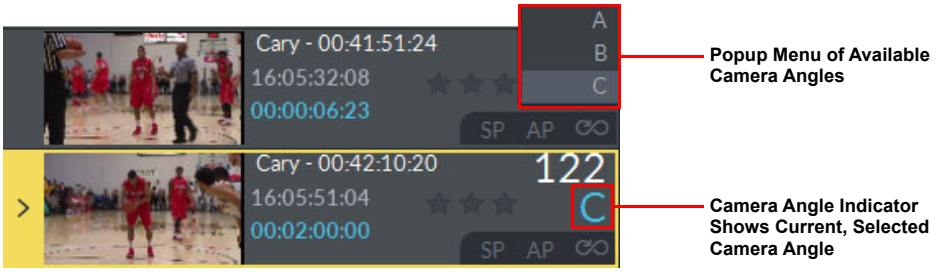


Fig. 6-12: Selecting the Current Camera Angle for a Clip

To preview other available multi-cam angles:

1 Press and hold on the camera angle indicator.
  A scroll-box opens displaying all available angles.
2 Scroll to the desired camera angle, and release.

Star-rating and Tagging Clips

LiveTouch provides a star-rating function that allows you to rate clips by assigning one to three stars. In addition, a tagging tool allows you to tag selected clips with pre-configured text labels for example, representing specific events, or team members from a number of rosters.

Loading Available Tag Lists and Rosters

Tag lists and rosters are saved centrally on the LiveTouch Manager. You can, however, access the available lists from the Desktop Client and load them locally to suit your specific requirements.

You can choose to load one tag set and any number of rosters. Once cached locally, you can add new tags, remove tags, change the displayed order of tags, or even assign favorite tags to your keyboard function keys.

It is important to note that any changes you make locally are not reflected back to the LiveTouch Manager, however, you can refresh the tag set or rosters from the source files on the LiveTouch Manager to revert to the original content.

View and load available tag lists and rosters as follows:

1 Click Tags to open the Tag Sheets pane.

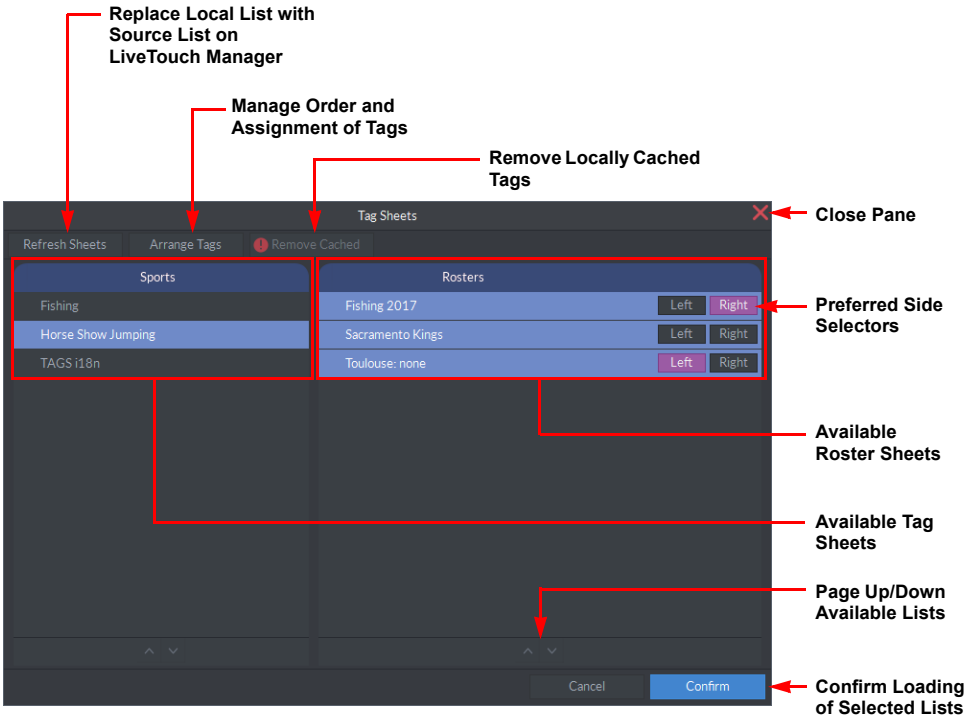


Fig. 6-13: Selecting Available Tag Sheet and Roster Lists

2 Select the tag sheet and rosters you want to use when clipping.

Each available roster provides Left and Right selectors, which allow you to set your favored roster in the left or right position of the tag selection screen. This means that you can access these two roster sets immediately, without scrolling. If you also select additional rosters, you can scroll to them in the Clip Tagging pane by clicking > at the top-right of the roster list.

3 Click Confirm to load your selected tag sheet and rosters.

The other softkeys in the Tag Sheet pane have the following functions:

- Refresh Sheets — Refreshes the tag sheets from the original source lists maintained on the LiveTouch Manager.
- Arrange Tags — Opens the Arrange Tags pane, enabling you to add or delete tags locally, change the displayed order of tags and assign tags to quick access function keys.
- Remove Cached — Clear the local cache to remove all changes you have made to your local tag list or rosters. The exclamation point symbol shows that you have locally cached tag lists and rosters that have been removed from the LiveTouch Manager; click this button to remove these lists and rosters.

Managing Tags Locally

You can manage content and arrange the displayed order of your tag lists from the Desktop Client. In addition, you can assign nine favorite or frequently-used tags to keyboard function keys **F3** through **F11** so that they can be quickly applied directly from the main screen when clipping.

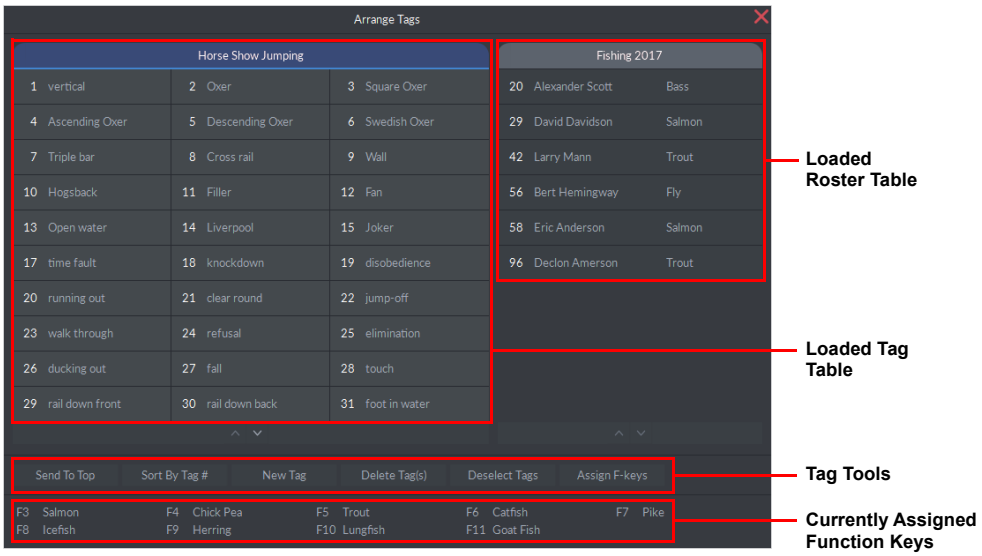


Fig. 6-14: Local Arrange Tags Pane

Once cached locally, you can manipulate the tag list to suit your specific requirements.

Before using the tag tools, you need to select the clips on which they are going to act. Select and deselect tags as follows:

- Click any tag to select it. Selected tags are highlighted with a blue background.
- Click a selected tag again to deselect it, or click Deselect Tags to deselect all tags.

The available tag tools have the following functions:

- ^ v — Page up or down through long rosters or tag lists. Shift + Up/Down arrow keys takes you to the previous or next page.
- Send To Top — Send the selected tags to the top-left position in the tag table.
- Sort By Tag # — Order the tags by tag number (default sort.)
- New Tag — Insert a new tag using the soft keypad. The tag remains local to the Desktop Client and is not saved to the LiveTouch Manager. The new tag is always allocated the next available tag number.

- Delete Tag(s) — Delete the selected tags from the local table. This does not affect the source tag table on the LiveTouch Manager.

- Deselect Tags — Remove the selection highlight from selected tags so that they are no longer subject to the tool actions.

- Assign F-keys — Activate the assignment of tags to Function keys **F3** through **F11**. Once activated, select a tag then the appropriate function key to which you want it assigned. Repeat for other tags and function keys, then press Save.

  When a tag is assigned to a function key, you will see the number of the corresponding key displayed in the top-right corner of the tag in the table:

.

  In clipping mode, the assigned function keys are listed in the Application Bar at the foot of the main Desktop Client screen, see Figure 6-15.

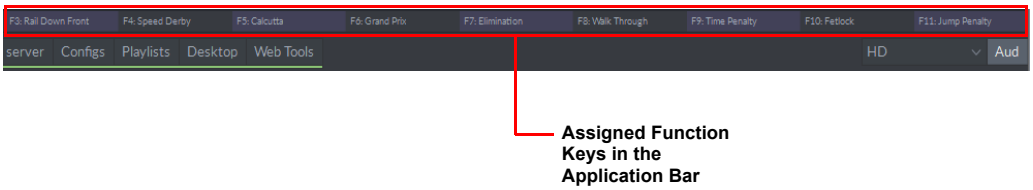


Fig. 6-15: Assigned Function Keys Shown in the Application Bar

When you have completed the organization of your tags, click ✕ to close the Arrange Tags pane.

Applying Tags to Clips

Apply tags or roster labels as follows:

1. Select the clip or clips you want to tag.
2. Either press the appropriate function key (**F3** through **F11**) to apply tags directly, or
3. Right-click and select **Clip Tagging** from the **Options** menu.

   This displays your available tagging options, see Figure 6-16.

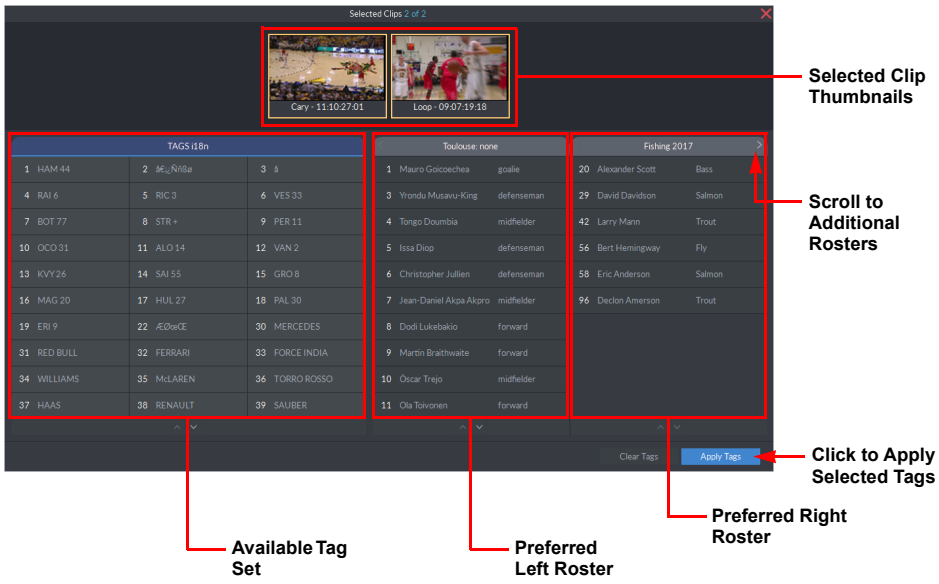


Fig. 6-16: Tag Selection Window

4 Select the tags or roster labels you want to apply to the selected clips, then click Apply Tags.
This applies the tags to the target clip(s) and returns you to the main clipping screen.

Removing Tags from Clips

When tags or roster labels are no longer required, you can remove them from a clip as follows:

1 Select the target tagged clips.
2 Right-click and select **Clip Tagging** from the **Options** menu.

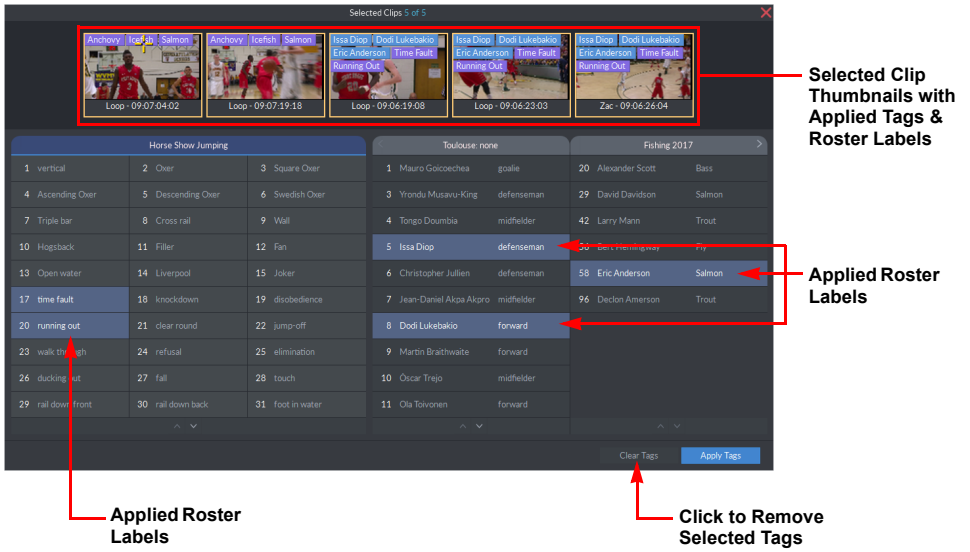


Fig. 6-17: Removing Tags from Clips

3 Click Clear Tags then Confirm.
This removes all tags and roster labels from the selected clips and returns you to the main clipping screen.

Editing a Clip

To edit a previously saved clip in the library:

1 Select the clip for editing from the library using the ▲ or ▼ keys on the panel.
Alternatively, use the Up and Down cursor keys on the keyboard. The yellow highlight indicates the current selection.

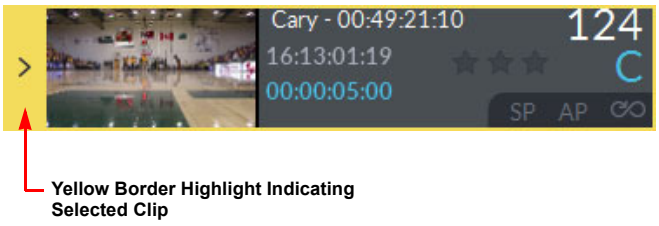


Fig. 6-18: Clip Selected for Editing

2 Press CUE to select the clip, then press EDIT MARK.
In the Port Status Area the current in and out points of the selected clip are displayed on the play offset bar.

3 Use the jog wheel, together with GoTo In IN or GoTo Out OUT, to change the in and out points of the clip before re-saving.

Renaming a Clip

To edit the name of a clip:

1 Right-click on the target clip and select **Rename** from the **Options** menu.
This opens the soft keyboard with the current clip name highlighted in the entry field.

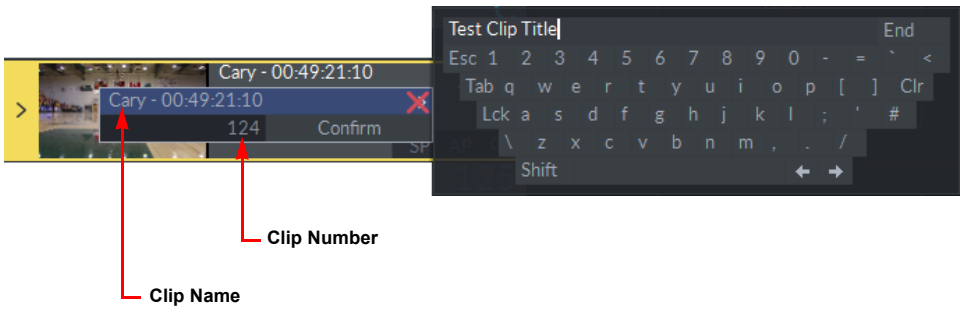


Fig. 6-19: Clip Selected for Renaming

2 Edit the title as required.

3 If the clip number also needs to be changed, press the **Tab** key to move the cursor to the numeric field below the clip name, or click the number using the mouse.
A numeric keypad is displayed enabling you to edit the clip number.

4 Press **End** to save your changes.

Renumbering a Clip

> Note: It is important to remember that changing the number of a clip also changes its position in the library.

To edit the number of a clip:

1 Right-click on the target clip and select **Rename** from the **Options** menu.

2 Click on the clip number with the mouse.
This opens the numeric keypad.

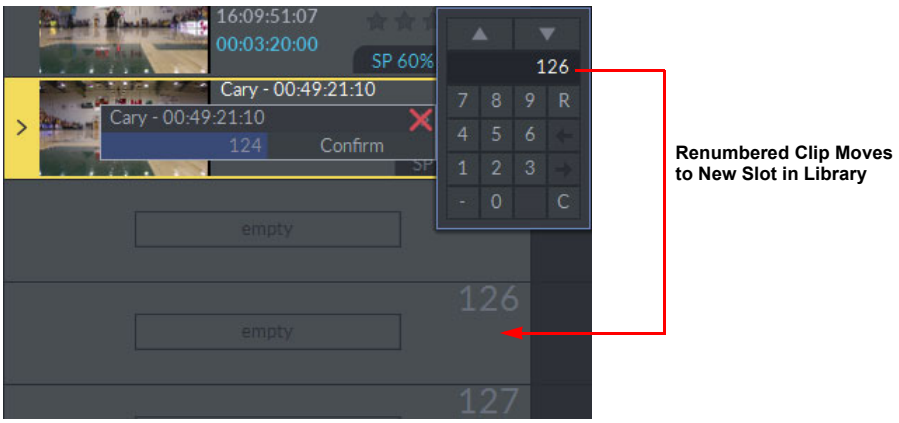


Fig. 6-20: Clip Selected for Renumbering

3 Edit the number as required.

4 If the clip name also requires changing, click the title field as previously described.

5 Press **Confirm** to save your changes.

Running a Library Search Using the Web Bin

The LiveTouch web bin enables you to search through all available material on the system. You can search by title, library slot, or user either to load clips into the local library, or to send clips directly to a playlist.

Network settings for the search are defined in the Browser Settings section of the Desktop Settings menu as follows:

- Select: **Start: All Programs: Grass Valley: LiveTouch** *<version>***: LiveTouch** *<version>* **Settings**

  Paste the Web tools URL into your browser and enter the IP address of the Web Bin into the WebBin entry of the XML file:

  ```
  <url name="WebBin" path="http://10.165.22.28:9192/livetouch-ui/#" launch_key_code="6"/>
  ```

  Note: The launch key code = 6 enables you to launch the Web Bin quickly by pressing the keys **Ctrl** + [**F**].

To open the web bin from the Application bar:

1 Press **WebTools**, then select **Web Bin** from the menu.

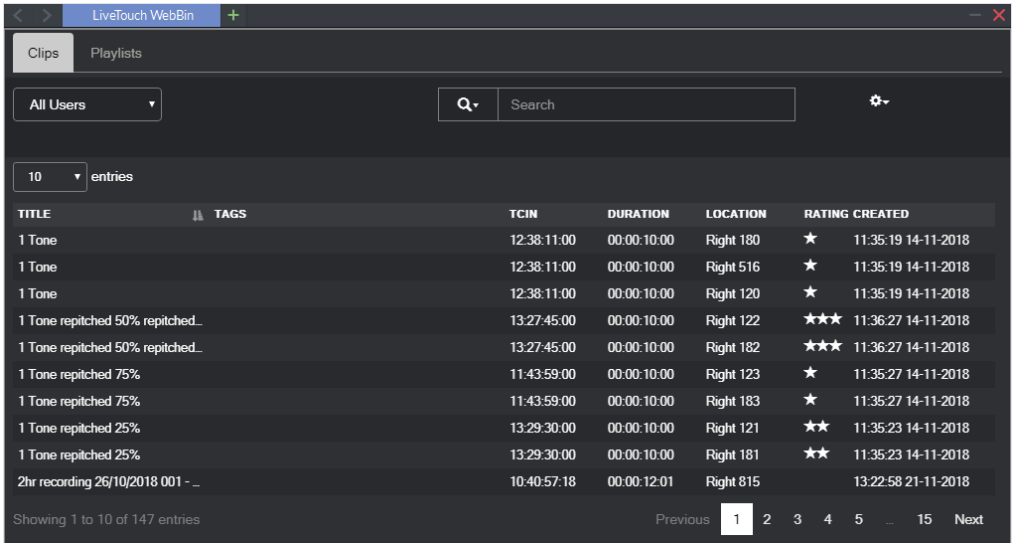


Fig. 6-21: Using the Web Bin

2 Type a search string into the Search field.

The display changes dynamically, as you type, filtering the entries according to your entry.

The search filters use all categories, not just the title, so clips can be searched using timecode, location, etc.

3 Use the page navigation tools at the bottom right of the screen to see more results if there are more entries than fit on a single page.

- To send selected clips directly from the web bin search results to a playlist, press

.

  Selected clips are sent to the current playlist.
- To clear a search press displayed just below the search field.
- To close the web bin hover over the top-right corner of the window and press .

Working with Playlists

Overview

A playlist is a collection of saved clips, collated and ready for play-out. Each playlist is stored as a separate tab in the playlist area.

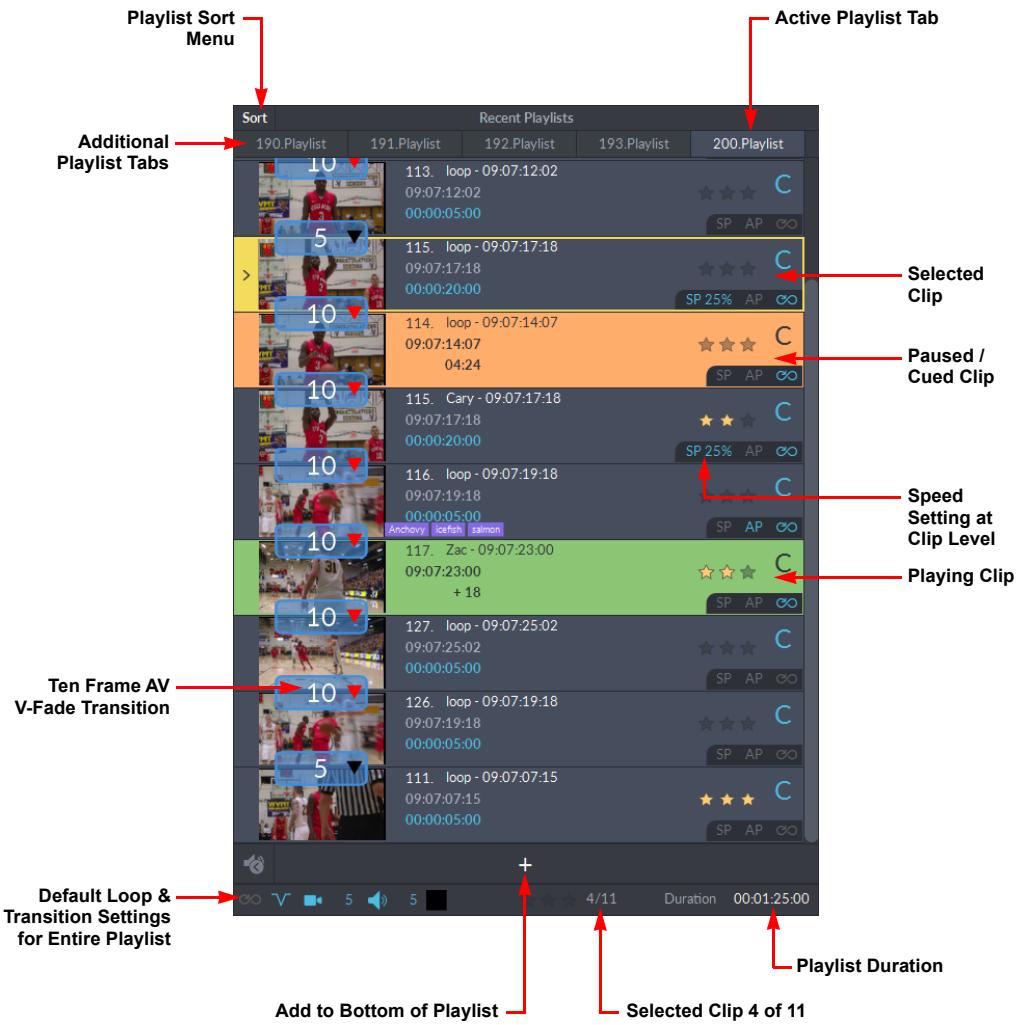


Fig. 6-22: Playlist Panel (for Illustration Only)

Creating a Playlist

A playlist contains a number of clips collected together in a single, named list that you can play-out continuously to air until complete, or until you intervene manually to stop play.

To create a playlist:

1 Select one or more clips from the library.

2 Press NEW PL / + To PL on the Panel, or Send in the action bar on the touchscreen.

LiveTouch creates a playlist, indicated by a numbered **Playlist** tab at the top of the list. You can add further playlists as new tabs along this same row.

You can edit the tab names and numbers as required, see the section *Renaming or Renumbering a Playlist Tab*, on page 180.

When you create a playlist, LiveTouch creates a temporary copy of the playlist in the library slot corresponding to the playlist number. LiveTouch deletes this temporary library item when you close the playlist or close the output (playout port).

3 Press on a tab to open the corresponding playlist and display its contents.

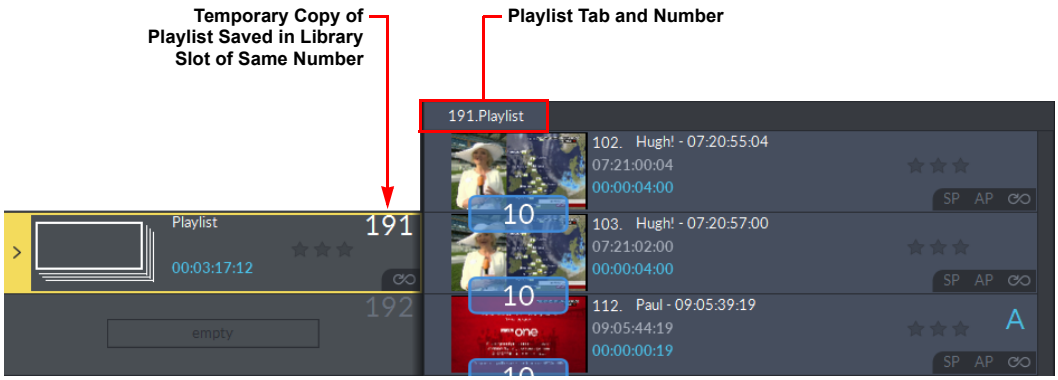


Fig. 6-23: Playlist and Temporary Copy in Numbered Library Slot

LiveTouch numbers playlist tabs incrementally so that you can send clips directly to the appropriate playlist number, as follows:

- Press the key sequence ***nn*** NEW PL / + To PL.

  This sends the currently selected clip to Playlist ***nn***. The clip is appended to the bottom of the playlist.

  If Playlist ***nn*** does not exist then LiveTouch creates a new playlist.

You can edit individual clips in a playlist as you would for library clips. See the section *Editing a Clip*, on page 173.

Switching Between Playlists

To switch between playlists, either:

- Press directly on a playlist tab
- Use the navigation controls on the panel, or
- Press [***Slot_Number***] + [**P**] to go to the playlist directly, even if hidden.

The currently selected (on-air) playlist tab is highlighted.

Playing a Playlist

A playlist can be block-played in full, or individual clips cued or taken, as required.

The color of the current clip indicator bar is either Orange (Cued), or Green (Playing), see *Figure 6-24* on page 179.

In PGM/PRV mode, press

to take a cued clip on the PRV preview channel across to the PGM channel (cross-roll), either to play-out immediately or with cued status, depending on your configuration. See the section *Working in PGM/PRV Mode*, on page 160.

Editing a Playlist in the Edit Timeline (Optional)

With the **Edit** option installed, you can edit playlists to apply transitions, add effects, etc.

Press on a playlist tab and drag the playlist to the Application bar and drop on the Edit tab of the application bar.

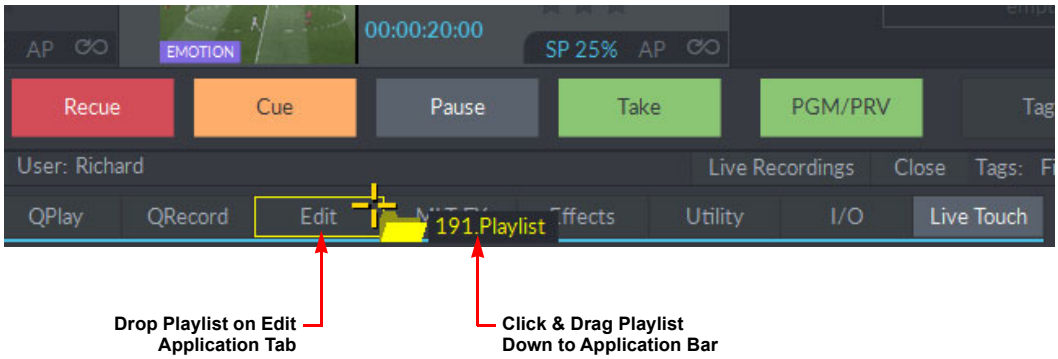


Fig. 6-24: Dragging a Playlist to the Edit Application

The playlist displays on the timeline with all event clip tails available.

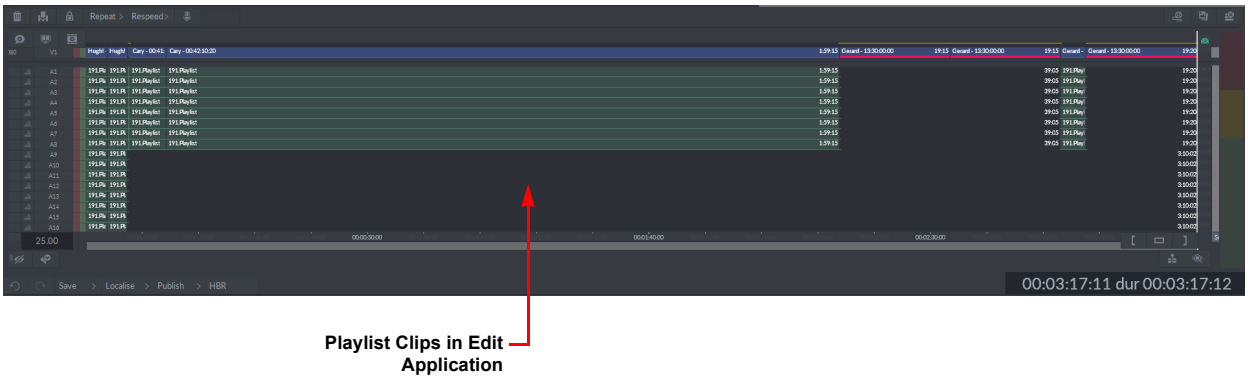


Fig. 6-25: Playlist Clips Imported into Edit Application

See the *Desktop Editing User Guide* and *Timeline Editing User Guide* for details about editing clips.

Sorting a Playlist by Timecode

You can sort a playlist by timecode using the **Sort** tools in the top left-hand corner of the playlist:

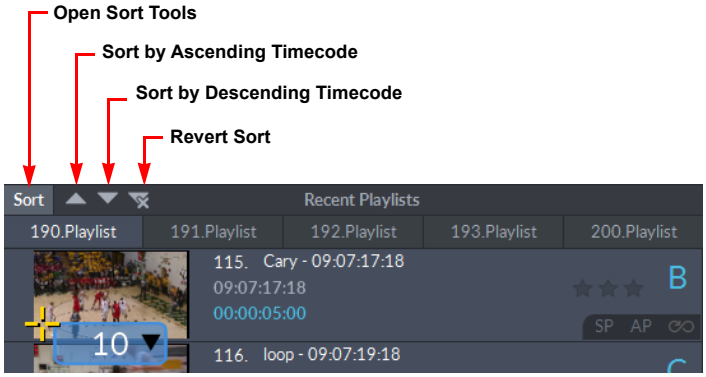


Fig. 6-26: Playlist Sort Tools

To sort a playlist by timecode, press Sort, then select the appropriate tool to sort by ascending or descending timecode as shown in Figure 6-26.

To revert to the original playlist order, press: .

Renaming or Renumbering a Playlist Tab

To edit the name or number of a playlist tab:

- Right-click the target tab and select **Rename** or **Renumber** from the menu.

Deleting Clips from a Playlist

To delete a clip or clips from the currently selected playlist:

1. Select the clip or clips to be removed.
2. Press **Delete**.
   If you remove all items from a playlist, the playlist tab remains open.

Closing a Playlist

> Note: You can not close the on-air playlist.

To close a playlist:

1. Hover over the top-right corner of the playlist tab and press .
2. Select the relevant option from the displayed menu:

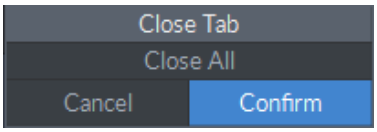


Fig. 6-27: Playlist Close Menu

Option	Description
Close Tab	Closes the currently selected playlist. Press Confirm when requested to complete the action.
Close All	Closes all playlists. The current port window remains open, but empty. Press Confirm when requested to complete the action.
Confirm	Confirm the Close action.
Cancel	Closes the menu without making any changes.

Note: When closing a playlist, LiveTouch deletes the temporary copy of the playlist from the Clips Library.

Editing Transitions Between Clips in a Playlist

You can edit transitions between clips in a playlist, either on a clip-by-clip basis, or across a range of clips. The current transitions settings (when set) are displayed as a blue box between the clips, see Figure 6-29.

You can also set transitions directly using the LiveTouch Panel, see the section *Editing Transitions Between Clips in a Playlist*, on page 79.

To edit a transition:

1 Select a clip in a playlist, then either press the transition icon (or) or click the blue transition box between clips.

This opens either the short Clip Transition Presets menu, see Figure 6-28, or the long Playlist Transition Presets menu, see Figure 6-29.

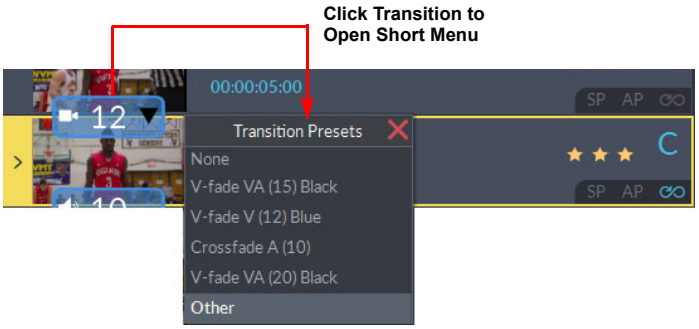


Fig. 6-28: Modifying Playlist Transition Presets on the Desktop at Clip Level

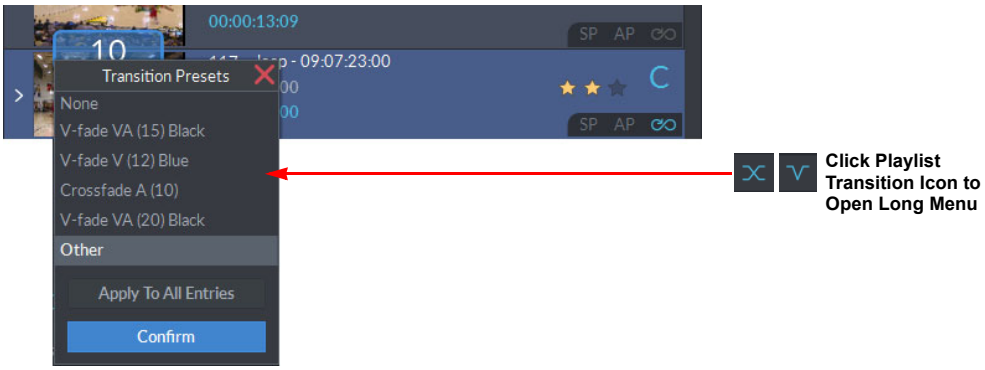


Fig. 6-29: Modifying Playlist Transition Presets on the Desktop at Playlist Level

2 Select the type of transition, either crossfade, V-fade or none and the duration from the defaults available.

If you select a crossfade transition, you can edit the number of frames over which the crossfade occurs.

3 Press Confirm, or press **Apply to All Entries** to apply the transition to the entire playlist.

Defining Transition Settings

You can set a default transition for a pair of clips or the entire playlist as follows from either of the Transition Presets menus as follows:

1 Select: **Other** then press Confirm.

This opens the Transitions menu, see Figure 6-30.

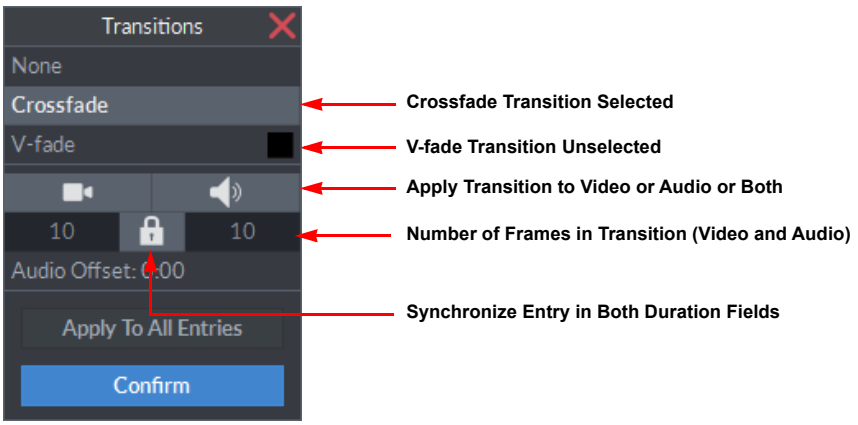


Fig. 6-30: Transitions Options Menu

2 Select whether to apply a transition:

- **None**: No transition applied (equivalent to a cut between clips)
- **Crossfade**: Apply crossfade transition between clips.

- **V-fade**: Apply V-fade transition between clips.

3 If applying a transition, set the number of frames in the transition using the numeric keypad.

4 Select whether to apply the transition to video only , audio only , or both.

5 If opened at the playlist level, select whether to apply to all entries or only the selected clips.

If you choose to apply to all entries, LiveTouch automatically applies the default transition to any new entries added to the playlist.

You can assign a different default transition to any of your playlists.

Using Split Audio Mode on the Desktop Client

Use the split audio tools on the Panel as follows:

1 Click at the bottom of the playlist to launch split-audio mode.

This reveals a new column, to the left of the pane, representing the audio tracks, together with any configured audio transitions.

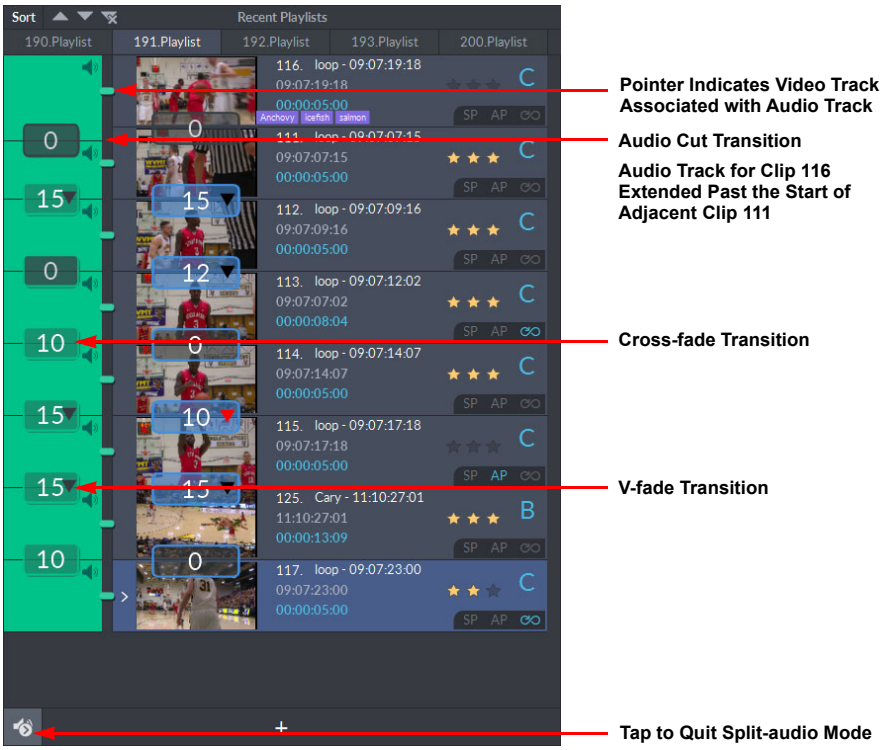


Fig. 6-31: Split-audio Mode

2 Select the target clip for which you want to adjust the audio track.

3 Press CUE to cue the target clip and position the red playhead at the current in point of the clip.

4 Press EDIT MARK to initiate edit mode (for the audio clip only) enabling you to reposition the red playhead by turning the jog wheel.

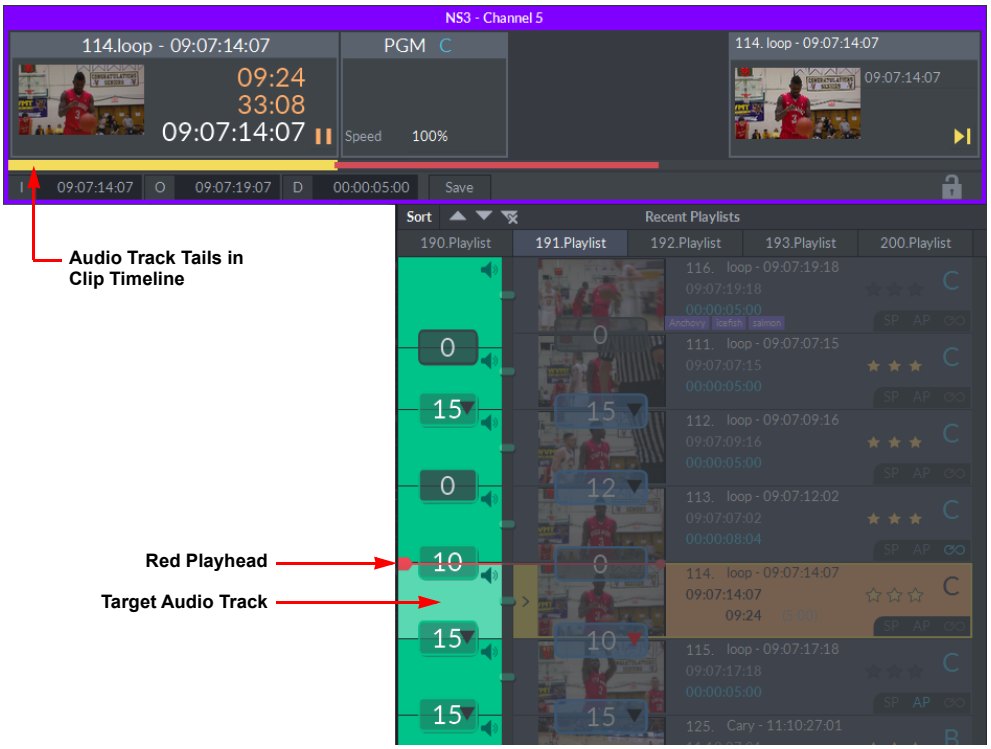


Fig. 6-32: Split-audio Mode Initiated

A representative image of the track and its leading tails is displayed in the clip timeline.

A schematic overview showing how LiveTouch builds a clip and its tails for a standard clip duration of 5 seconds at a frame rate of 25 frames/second is shown in Figure 3-66 on page 103.

When adjusting transitions, always make sure that your target clip includes sufficient tails to complete the operation.

5 Turn the jog wheel to position the red playhead at the new in point from which you want the audio track to start.

As long as the audio track has sufficient tails, you can extend the audio track so that it starts to play in the time-frame of the preceding track of the playlist. Alternatively you might choose to delay the start of the selected audio track by extending the preceding track into the current track.

> Note: Make sure that your target clip tails include at least 12 frames in addition to the frames included in the transition.

6 Press

to set the new in point for the audio track.
You will see that the vertical height of the audio track adjusts to the new in point.

7 If you also want to set a new out point for the audio track, press

to initiate split-audio edit mode.

8 Turn the jog wheel to position the red playhead at the new out point at which you want the audio track to stop.

9 Press

to set the new out point for the audio track.
You will see that the vertical height of the audio track adjusts to the new out point.

10 Once you are satisfied with your edit, press to exit from split audio mode.

Audio Patching in a Playlist

You can set audio patching for any of the clips in a playlist as you would in the clips library.

For more information, see the section *Audio Patching*, on page 165.

Setting a Speed Profile for a Playlist

You can set a constant speed or variable speed profile for any of the clips in a playlist as you would in the clips library.

For more information, see the section *Setting a Constant Speed Slo-mo*, on page 166, or *Setting a Speed Profile*, on page 166.

Looping Clips in a Playlist

You can set looping at the clip level or for the entire playlist.

If you set looping at the playlist level, the playlist will loop-through on playout until you intervene manually to stop the loop. If, however, you choose to loop individual clips in a playlist, or loop a group of clips, the playlist will play-out each successive clip until it reaches the clip-set to loop, at which point the clip or group will loop until you press

to progress to the next clip.

For more information on looping, see the section *Looping a Clip*, on page 167.

Switching Camera Angles in a Playlist

If a playlist clip is in a group of saved multi-cam clips, a camera angle indicator displays in the clip details of the playlist entry.

To preview other multi-cam angles for a clip:

1 Press and hold on the camera angle indicator.
A scroll box opens displaying all available angles.

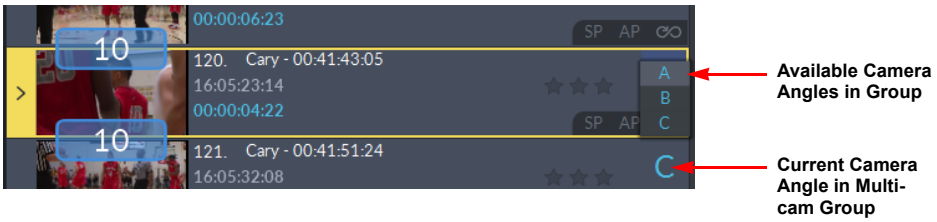


Fig. 6-33: Selecting a Different Camera Angle for a Playlist Clip

2 Scroll to the desired camera angle, and release.

Entering Data in the LiveTouch Fields

LiveTouch provides a soft alphanumeric keypad and a soft numeric keypad, which you can use to enter the required data into the LiveTouch input fields.

Entering Alphanumeric Text

Blank fields that require text entry such as a name or category, when pressed, display a soft keyboard allowing you to enter text. (You can also enter text using a connected external keyboard.)

The following diagram shows the soft keyboard functions.

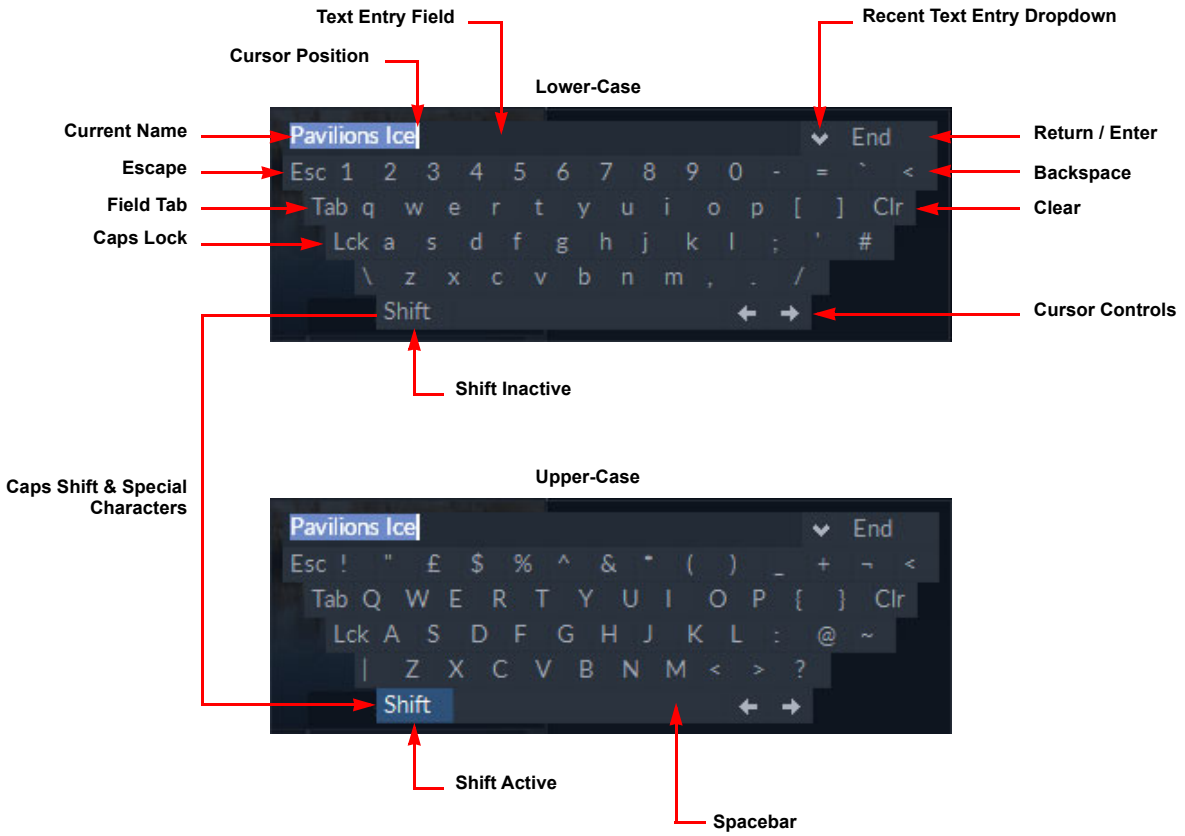


Fig. 6-34: Soft Keyboard on LiveTouch Desktop

Entering Numeric Values

Numeric fields, when pressed, display a soft numeric keypad that enables you to enter a numeric value. You can also enter numbers using a connected external keyboard.

The soft keypad provides additional functions over a standard keypad, and is used as follows:

1 Enter a value using the buttons on the popup.

The new value displays in the popup. Tap on this box to transfer the value, then tap on it again to close the popup (or press <**Return**> on the external keyboard). If required, press the **C** box to clear the value, or the **R** box to reset the numeric box to its default value.

2 Alternatively, enter a smaller value and press the **Inc** (increment) and **Dec** (decrement) boxes to change the number in smaller steps.

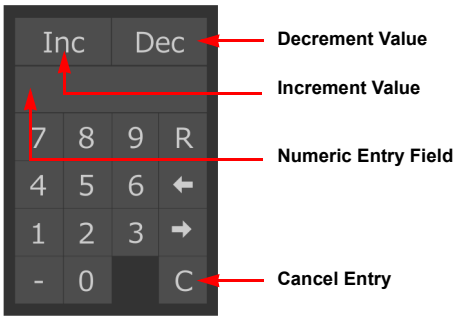


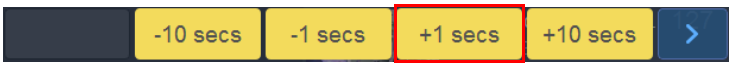
Fig. 6-35: Soft Numeric Keypad on LiveTouch Desktop

For a table listing the keyboard shortcuts available for many LiveTouch functions, see the section *Keyboard Shortcuts*, on page 189.

Keyboard Shortcuts

The following keyboard shortcuts are available for many LiveTouch functions:

Keyboard Shortcut	Action
LiveTouch Navigation Shortcuts	
Arrow Up **Arrow Down**	Navigate up or down library/playlist storage.
Arrow Left **Arrow Right**	Navigate between banks in a page.
Alt + Left-Arrow **Alt + Right-Arrow**	When focus on clips library, cycle through library Pages. When Focus on playlist tabs, cycle through available playlist tabs.
Page Up **Page Down**	When focus on clips library, cycle through library Pages. When Focus on playlist tabs, move **8** clips up/down in a playlist
Home	Go to Bank 1, Slot 1 on current page.
Alt + Home	Go to Page 1, Bank 1, Store 1.
End	Go to the last clip in the store.
Ctrl L	Go to Live point in active port window.
***nn* Enter**	*nn* > 10 Go to page + bank. *nn* >=100 Go to page + bank + slot.
Shift + I	Go to last set in point.
Shift + O	Go to last set out point.
;	Go to the previous edit mark.
'	Goto the next edit mark.
P	Go to the last accessed clip in the current playlist; press again to go to the top of the playlist. Equivalent to the key on the panel.
Shift + P	Toggle focus between playlist and clips library. Equivalent to: + keys on the panel.
Clip Management and Control Shortcuts	
Spacebar	Play clip in active port window.
J	Shuttle backward 1, 2, 4, 8, 16x.
L	Shuttle forward 1, 2, 4, 8, 16x.
K	Stop play of clip in active port window.
Ctrl + C	Copy selected clip(s).
Ctrl + V	Paste selected clip(s).

Keyboard Shortcut	Action
Ctrl + X	Cut selected clip(s).
Ctrl + N	Create new playlist with selected clips in the order of selection.
Ctrl + P	Send selected clip(s) to the active playlist in the order of selection.
Alt + P	Publish selected clips to the LiveTouch server.
R or r	Rename and/or renumber the selected clip.
S	Save selected clip(s).
Delete	Delete current clip(s)
Return	Cues the selected entry.
C	Step back through clip by the duration set in **box 1** of the **General** section of the **User** settings configuration on the Panel, or specified in the **Step 1** item of the Desktop <**F1**> configuration.
V	Step back through clip by the duration set in **box 2** of the **General** section of the **User** settings configuration on the Panel, or specified in the **Step 2** item of the <**F1**> configuration.
B	Step forward through clip by the duration set in **box 3** of the **General** section of the **User** settings configuration on the Panel, or specified in the **Step 3** item of the<**F1**> configuration. 
N	Step forward through clip by the duration set in **box 4** of the **General** section of the **User** settings configuration on the Panel, or specified in the **Step 4** item of the <**F1**> configuration.
LiveTouch Operational Control Shortcuts	
T	Open the Transition Presets popup menu for all clip transitions in the playlist.
Ctrl + T	Open Transition Presets popup menu for an individual clip transition in the playlist.

Keyboard Shortcut	Action
Ctrl + F	Open the web bin. On the Desktop, requires the following string to be included in the configuration file: C:\Data\QChromium\ExampleGenQBrowserURLs.xml: **<url name="WebBin" path="http://<*IP_address:port*>/ livetouch-ui/#" launch_key_code="6"/>**
A	Open the Tagging Options window to apply tags to selected clips.
:	Display the timecode entry field.
Return	Completes the entry of a number or timecode.
Tab	Cycle the active port window.
Marking In / Out Point Shortcuts	
I	Mark in point in clip, to mark a clip of default duration forward from in point.
O	Mark out point in clip, to mark a clip of default duration back from out point.
M	Enter mark in and out points to mark a clip of any desired duration.
Return	Saves a clip when I/O mark boxes are open.
Shift +	On Live, press **I** (in) then **+** to open the **+TC** (future timecode) entry field enabling you to enter a future offset timecode. Enter the offset (e.g. 00:30:00:00), then press **O** (out). Press records that length into the future.
Application Interface Shortcuts	
E or e	Take selected entries to the LiveTouch Edit timeline.
X	Take selected entries to I/O menu.
Clip Tagging Shortcuts	
Shift + Tab	Cycle focus of previous list in tag window.
Shift + Down Arrow **Shift + Up Arrow**	Navigate to the next page of tags in the tag window.
Miscellaneous Shortcut(s)	

Keyboard Shortcut	Action
Ctrl + C on empty slot	Clear copy buffer.
Shift + Ctrl + Tab	Toggle the port window lock on or off.

7 Configuring the LiveTouch Desktop Settings

Overview

In addition to the Settings configuration on the Panel (see the chapter *Configuring the LiveTouch Panel Settings*, on page 109) the elements described in this section need to be configured either in the <**F1**> menu or the Desktop Settings menu.

> Note: Some elements can be configured through either the Desktop or Panel. If you make a change to a setting using the Panel Settings menu it will be reflected through to the Desktop and *vice versa*.

Using the <F1> Configuration Window

From the LiveTouch Desktop application, press <**F1**> to open the configuration window. The LiveTouch menu contains the default settings of the functions that you can configure.

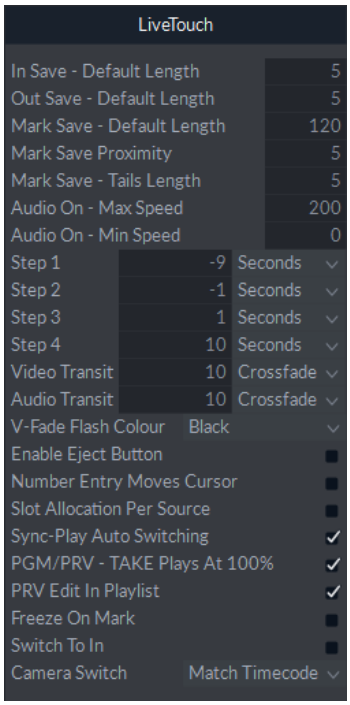


Fig. 7-1: LiveTouch Settings in the <F1> Configuration Menu

To close the <**F1**> Configuration Window, either press <**F1**> again or press . at the top right of the window.

Edit Mark Settings

The Edit Mark settings are as follows:

Setting	Description
In Save - Default Length	Defines the default duration (in seconds) of an event mark when you press the key. Clip duration following the in point (Default = 5 seconds).
Out Save - Default Length	Defines the default duration (in seconds) of an event mark when you press the key. Clip duration preceding the out point (Default = 5 seconds).
Mark Save - Default Length	Set the default duration (in seconds) of an edit event captured when you press the key and save the clip. Clip duration following mark point (Default = 120 seconds).
Mark Save Proximity	Set the time (in seconds) during which a second press of a mark button invokes the Edit Mode (Default = 5 seconds).
Mark Save - Tails Length	Set the length of tails at the beginning and end of a clip saved using the key (Default = 5).

Speed-based Audio Mute Settings

This function is intended to prevent distortion of the audio signal when the play speed of a clip is reduced or increased and toggles the speed-based audio mute function on/off when the threshold limits are exceeded.

When this function is on it is identified on the Desktop using the icon: .

The following settings define the upper and lower speed limits, outside of which any audio is muted, when the Audio Mute toggle is set.

Setting	Description
Audio On - Max Speed	Set the upper speed limit, above which any audio is muted (Default = 200).
Audio On - Min Speed	Set the lower speed limit, below which any audio is muted (Default = 0).

For more information, see the section *Audio Mute Speed*, on page 113.

Transition Settings

Set the number of frames for a default transition duration. Select the transition type from the scroll box: either **V-fade**, **Crossfade** or **None**.

In addition, for FV-fade transitions, you can also select the V-fade flash color from the available colors listed in the scroll box.

Steps Functions

These options define the intervals of the Timeline step-through function, which determine how far to step along the timeline (play offset bar) each time you press a **Step** button in the Action Bar.

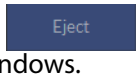
For each Step, determine the units, either frames or seconds, then enter a number in the numeric field to set the duration of the step. A negative number steps backward, and a positive number steps forward.

Changing the units of Step 1 in the LiveTouch section of the <**F1**> page also changes the setting of the step-through softkeys

on the Panel.

Changes to the units for Steps 2 - 4 do not change the setting of the step-through softkeys on the Panel.

Enabling the Eject Function

Select the **Enable Eject Button** checkbox to enable the 

button in the Desktop Play Controls, allowing it to eject a clip from the port windows.

With the **Eject** button enabled, each clip that has been taken to air, must be ejected before the next clip is cued, see the section *Using the Play Controls in the Port Window*, on page 156.

Number Entry Moves Cursor

This option applies only when the library view is enabled. When selected, entering a number to jump to a particular page/bank/slot moves the library view accordingly with each digit entered.

Slot Allocation Per Source

This option applies only when the library view is enabled. When selected, on saving a clip, the number of the clip tab defines the part of the library to which the clip is saved. For example, saving a clip from tab 3 saves the clip into the next available slot in page 3, i.e., 300+.

Changing the Default Settings

If you need to change the LiveTouch default settings, they are configured in the **Settings** menu, which you can access as follows:

1 In Windows, navigate to: **Start** – **All Programs** – **Grass Valley** – **LiveTouch V#** – **Settings**.
2 Right-click **Settings** then select **Run as administrator**.

Some of these options only become available after running the software up for the first time.

See the *Workstation and Seat - Set-up and Admin Guide* for information about all other Settings menu features.

Opening the LiveTouch Settings Menu

- If not done already, select LiveTouch from the dropdown menu at the top of the window.

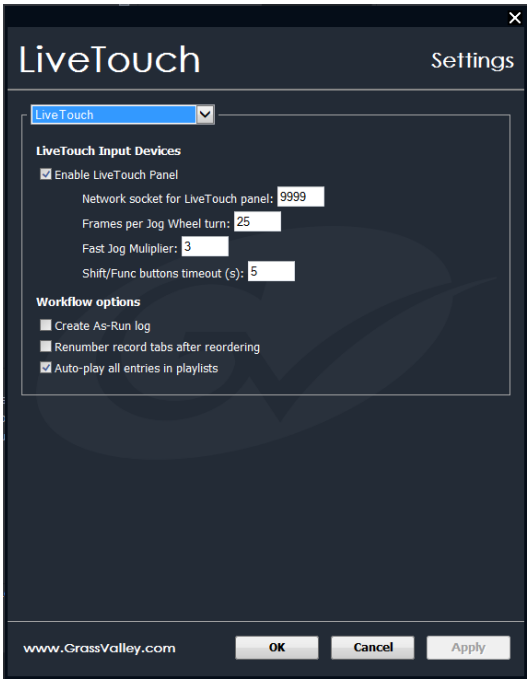


Fig. 7-2: LiveTouch Settings Menu

LiveTouch Input Device Options

If you have not already done so, select the **Enable LiveTouch Panel** checkbox to use the LiveTouch Panel. This is set on by default.

The panel uses a network connection to talk to the client, and the **network socket number for LiveTouch panel** specifies the socket number that the client must open to receive input from the panel. By default this is set to **9999**.

The other LiveTouch Input Devices options are as follows:

Option	Description
Frames per Jog Wheel turn	Defines how many frames the play head moves with a full rotation of the jog wheel.
Fast jog multiplier	Defines the multiplier for the speed of jog wheel when used in fast jog mode. Fast jog speed = Frames per Jog Wheel turn × Fast Jog Multiplier.
Shift/Func button timeout(s)	Defines the active duration following a press of the or keys during which a second key can be pressed to invoke certain extension functions.

Workflow Options

When the option **Create clip when saving marked segment** is selected, LiveTouch creates a new ISA clip, as well as a new playlist entry, when a marked segment is saved to a playlist.

The other Workflow options are as follows:

Option	Description
Create As-Run Log	Creates a readable log of the user inputs and the resultant actions.
Renumber Record tabs after reordering	When selected, enables you to reorder live recordings on the Desktop client, by dragging and dropping the tabs into the desired order with the mouse. This automatically renumbers the record tabs, and locks the recordings to the associated **A**, **B**, **C**, **D** keys on the Panel. **Note:** This function applies only to recordings that do not belong to a multicam group.
Auto-play all entries in playlists	When selected, automatically plays-out each clip in a playlist without manual intervention. If deselected, playout pauses after each clip and you will need to initiate playout by pressing the key.

Network Connections

The Network section is used to set up a seat for connection to the LiveTouch Manager as part of a network-wide configuration.

Select **Network** from the scroll box at the top of the window.

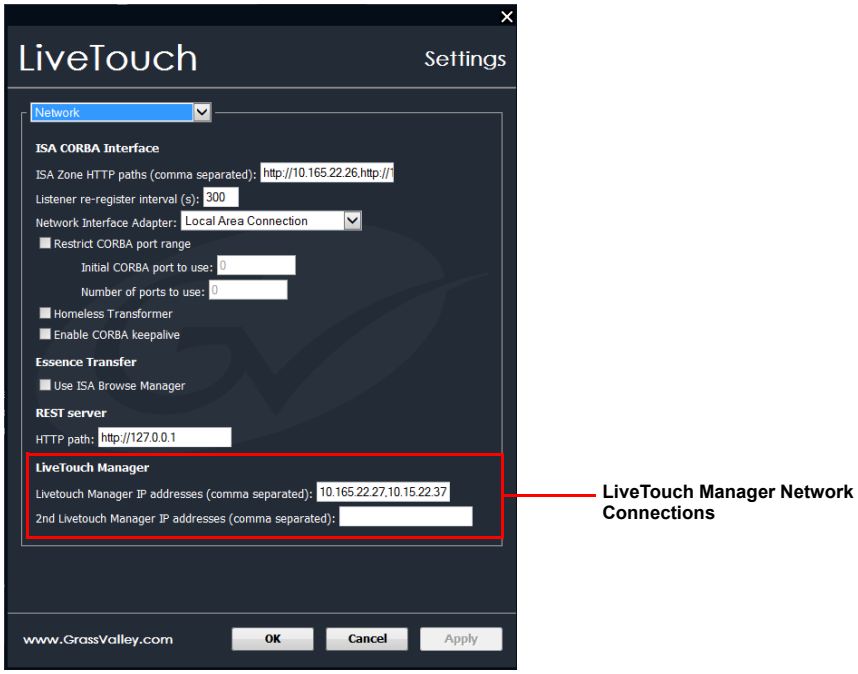


Fig. 7-3: LiveTouch Network Settings Menu

Enter the IP addresses of the LiveTouch Manager to allow the seat to talk to the LiveTouch Manager mid-tier using http.

Configuring the LiveTouch Output on the Server

Using Output Overlays

The video server can supply output overlays which, when selected, display details taken from the Port windows on the output monitor. The information displayed on the overlay can include:

- Server name/port number
- Number of entries in playlist
- Playlist number and name
- Total playlist duration
- Expect Finish/Time of Day
- Audio level meters
- Source timecodes
- Current clip play speed
- Time played/time remaining (in timecode)
- Position indicator bar
- Play speed indicator
- Clip name and number
- Clip duration
- In/Out durations

To configure the overlays:

1 Open the LiveTouch Dashboard and open the **Status Summary** web page for the server providing the ports to which you are connected.

2 Select **Configure**, then **SDI Channels**, see Figure 7-4.

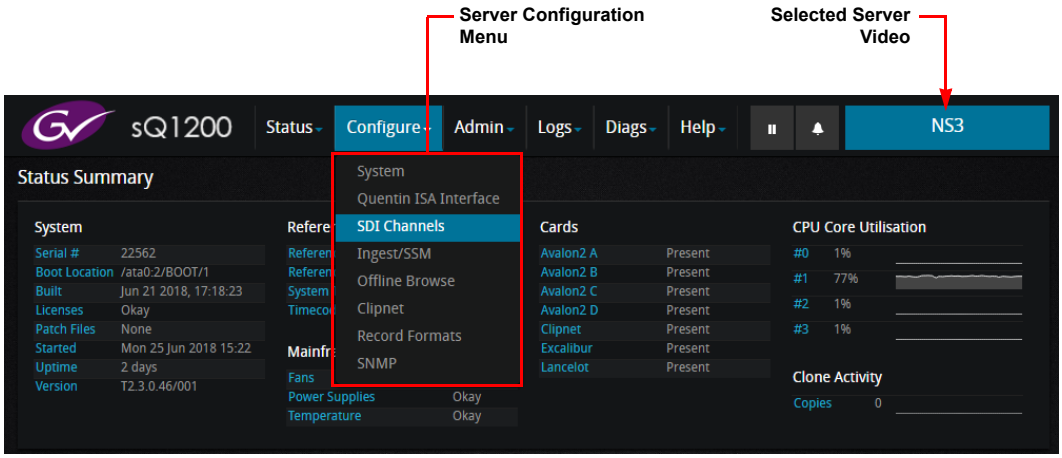


Fig. 7-4: Server Summary Page- Selecting SDI Channel Configuration

This opens the **SDI Channel Configuration** page for the selected server

3 Scroll down to the **Output Overlay Settings** section of the page.

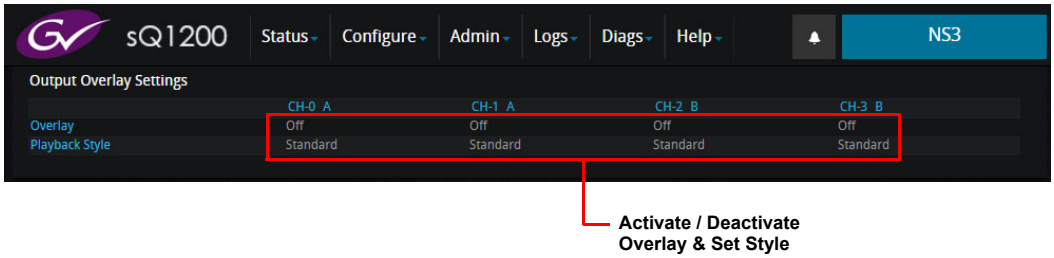


Fig. 7-5: Output Overlay Settings

4 In the **Overlay** row, for each target channel, click **Off** to open the **Overlay** menu. If an overlay is already active, this entry will display **Default**.

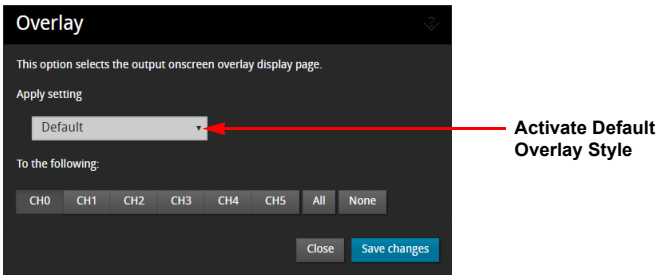


Fig. 7-6: Overlay Menu

5 To activate the overlay function, select **Default** from the dropdown menu, then select the channels to which it applies.

6 In the Playback Style row, for each target channel, click **Standard** to open the **Playback Style** menu.

7 Select either of the following overlay options:

- **Standard**
- **No TOD Completion**

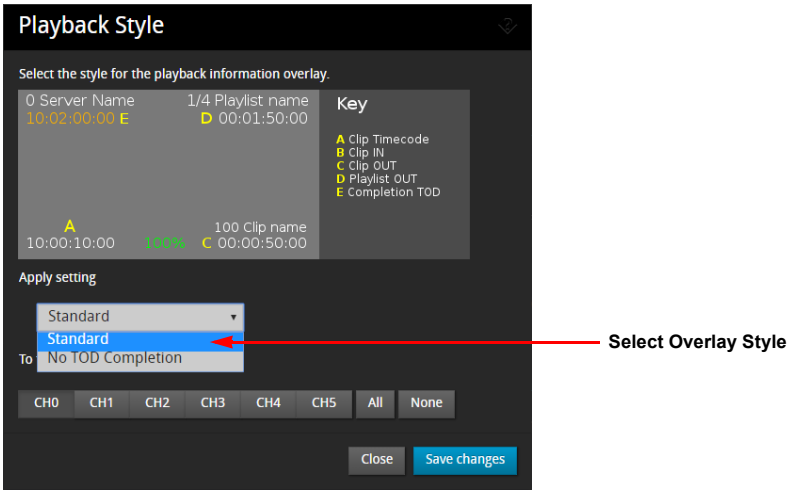


Fig. 7-7: Playback Style Menu

For a comparison of the two overlay style, see Figure 7-8.

8 Select the channels to which the overlay applies, then click **Save Changes**.

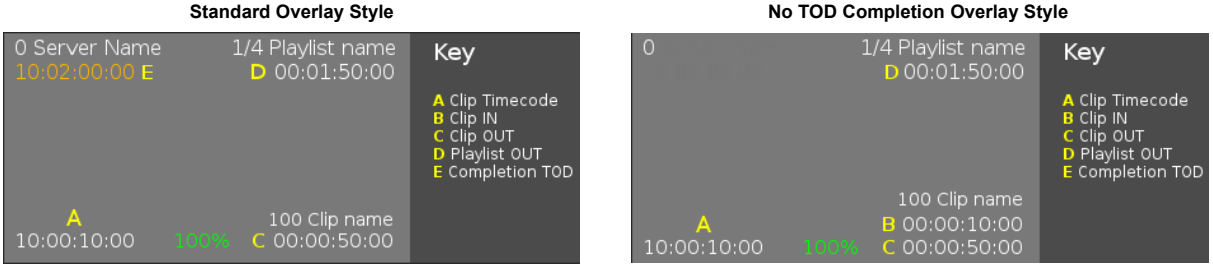


Fig. 7-8: Comparison of Available Overlay Style Templates

Up-scaling

Any edits that include lower resolution clips are up-scaled on playback to the selected native output format of the system.

Play-through

A recording from another server on the network can be streamed to the LiveTouch server, and used by the LiveTouch operator, in the same way as a local recording.

> Note: The play-through feature is subject to bandwidth calculations/ limitations.

Grass Valley Technical Support

For technical assistance, contact our international support center, at 1-800-547-8949 (US and Canada) or +1 530 478 4148.

To obtain a local phone number for the support center nearest you, please consult the Contact Us section of Grass Valley's website (www.grassvalley.com).

An online form for e-mail contact is also available from the website.

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